WESTERN EDITION
JANUARY • 1955

American Fruit Grower

Let it Rain!

CRAG Trade-Mark Fruit Fungicide 341

A GLYODIN SOLUTION

Gives You the Best Apple Scab Protection at the Lowest Cost

Thousands of growers over the past six years have proven to themselves that CRAG glyodin solution gives exceptional scab control even through prolonged rainy periods.

In addition to doing the best job on apple scab, you get these bonus benefits too:

- Outstanding Fruit Color and Finish
- Higher yields from healthier trees
- Red Mite Suppression
- Flexibility — When you can't outguess the weather, you can combine the long-lasting protection of CRAG glyodin solution with the after-rain control of liquid phenyl mercury.

You too will get the finest quality fruit at lowest cost per bushel when you use CRAG glyodin solution. So, for greater profits, put CRAG glyodin solution in your spray program. Get it at your dealer now.

CRAG AGRICULTURAL CHEMICALS are produced by

CARBIDE AND CARBON CHEMICALS COMPANY

A Division of Union Carbide and Carbon Corporation

30 East 42nd Street UCC New York 17, N. Y.

"Crag" is a registered trade-mark of Union Carbide and Carbon Corporation.

Entered as second-class matter at Post Office at Willoughby, Ohio, under the Act of March 3, 1879. Additional entry at Mount Morris, Illinois

The "40" Utility Tractor, shown here pulling a power sprayer, is built low to snuggle up to trees for close, clean work. Here's new speed, new convenience, new economy for all-around field and orchard work.

"Handyman" John Deere "40" UTILITY Tractor

In every agricultural community, the outstanding ability of John Deere "40" Tractors to get work done at low cost is helping farms to "go places."

If you have felt that *your* farm is stalemated, bogged down, your costs too high, here's a tip—see your John Deere dealer and learn what a handy, powerful, economical John Deere can mean to you in your farming operations.

Best way to get the complete story is to *take the wheel and drive* . . . experience the ease of handling . . . the ease of changing tools on the standard 3-point hitch . . . the extra comfort provided for the operator . . . the automatic action of the Load-and-Depth Control . . . and best of all, the effortless Touch-o-matic hydraulic implement control (rockshaft, regular; new double-acting remote cylinder extra).

Remember—in choosing *your* new tractor, it's *performance* with *economy* that counts . . . and that's where all John Deere Tractors speak for themselves.

Remember, too, when you choose a John Deere for your working partner, you can get just the matched equipment you need at any time during the tractor's long life . . . all built to the unwavering John Deere standard of quality.

All-Weather John Deere "40" CRAWLER Tractor

You've been wanting to get your hands on an all-around, year-around "crawler" tractor that's simple, easy to operate, and within reach of your pocketbook. Now's your chance. Just phone or drop in at your nearest John Deere dealer's store and set the date for a private demonstration of this "little giant" of the track-types. There's no obligation on your part.

Ask your John Deere Dealer for a Free Demonstration

JOHN DEERE
MOLINE, ILLINOIS

Send for FREE Literature

JOHN DEERE • MOLINE, ILLINOIS
Dept. H42

Please send me free literature on the

☐ "40" Utility ☐ "40" Standard
☐ "40" Crawler ☐ "40" Tricycle

*Name*_____

*R.R.*_____ *Box*_____

*Town*_____ *State*_____

"18 YEARS OLD *(43,200 meter hours)* ONLY ONE MAJOR OVERHAUL ON MY CAT® RD4 TRACTOR!"

Leonard Hess, Yuba City, California

"Here are the facts on my 18-year-old Caterpillar RD4 Tractor:

- Sleeves, rings and tracks average more than 12,000 hours . . . an average of 5 years per set!
- Burns about 2 gals. per hour of fuel at full load.
- Still in good shape—the RD4 handles a 10½′ disk harrow and 10½′ packer, or a 5 - 14″ moldboard plow.
- I'm 100% satisfied with the RD4, as well as the 7 other dependable track-type Tractors I've owned!"

How does *your* orchard or grove tractor measure up to Leonard Hess' RD4? If you've an hour meter on it, figure how long it will take you to put on 43,200 hours—and think of the overhauls, gallons of high-priced gas, tires you'd need. Think of the hours you'd waste pulling a 6′ to 8′ disk or 2-bottom plow when you could pull really big loads. Add up the costs of hiring work done . . . clearing out old, diseased trees . . . leveling land . . . building roads and ditches.

Add up all these savings and you'll realize that you'll profit by becoming a Caterpillar Diesel Tractor owner. See your dealer. NAME THE DATE . . . HE'LL DEMONSTRATE!

Caterpillar Tractor Co., Peoria, Illinois, San Leandro, Calif., U.S.A.

CATERPILLAR®

DIESEL ORCHARD TRACTORS
TOOL BARS · IMPLEMENTS

FREE BOOKLETS . . .
"Savings in Citrus," No. 30907 and "Owners Report on Caterpillar Farm Tractors," No. 31203. Get your helpful copies at your dealers or write Caterpillar Tractor Co., Dept. AMF15, Peoria, Illinois.

JANUARY 1955
VOL. 75 No. 1

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CHANGE OF ADDRESS

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[PRINTED IN U.S.A.]

Pfizer announces
the great new Antibiotic Crop Saver

Agri-mycin*100

THE FIRST SUCCESSFUL CONTROL FOR MANY PLANT DISEASES AND BLIGHTS—NOW READY FOR USE THIS SPRING

At this time, Agri-mycin 100 is recommended for the prevention of:

FIRE BLIGHT OF APPLE AND PEAR (use as a blossom and post-blossom spray)

BACTERIAL SPOT OF TOMATO AND PEPPER (spray seedling or transplant beds)

BLACKLEG & SOFT ROT OF POTATO (treat seed pieces in solution)

WALNUT BLIGHT (use as a pre-bloom and post-bloom spray)

Highly encouraging preliminary results with Agri-mycin have been reported in Agricultural Experiment Station Tests on bacterial spot of *peach*, wildfire of *tobacco*, halo blight of *snap beans*. Proper control measures are now being developed.

Laboratory work has shown that Agri-mycin 100 is active against microorganisms causing Bacterial Wilt of *corn, cotton, tobacco, peas;* Bacterial Pustule of *soybeans;* Bacterial Canker of *stone fruit, cucumber, tomato,* Common Blight of *beans;* Crown Gall; Bacterial Rot of *cabbage* and *carrots;* Black Spot of *lemon*. Field work is now in progress to determine proper controls.

One jar makes up to 300 gallons of spray. Water soluble, noncorrosive and nonclogging. Will not cause russeting of fruit.

With three full years of large-scale field tests behind it, Agri-mycin 100 is now being made available to all orchardists and vegetable growers.

The effectiveness of Agri-mycin 100 as a control for fire blight of apples and pears has been proved in nationwide tests involving *more than 100 thousand* trees in over 400 locations in 42 states and Canada. This last season Florida tomato and pepper growers used it to save the crop of *thousands of acres* threatened by an epidemic of the dreaded bacterial spot disease. Wide-scale tests on many other crop diseases (see list at left) have been completed. Still more are in progress.

Agri-mycin is the *only* antibiotic plant spray containing *Terramycin® to retard development of resistant bacterial strains.* It will be distributed by leading manufacturers of fruit and vegetable sprays, *under the name "Agri-mycin."* For effectiveness based on *proved results* look for Agri-mycin on the label.

Agri-mycin is a product of

Pfizer

*Trade Mark

Chas. Pfizer & Co., Inc., Brooklyn 6, New York

World's largest manufacturer of antibiotics

Terramycin® brand of oxytetracycline

▲ **Two V-8's and a Six** to choose from in this new Ford F-600 "2 tonner," GVW 16,000 lbs. New stronger 9¼-in. deep frame.

New Money Makers

Announcing NEW Ford Trucks, built to help you *make MORE money!* With important longer-life advancements! With the *only* full line of *proved,* modern Short-Stroke engines! With new *Driverized* Cabs for easier working! With new payload capacities! Plus all the proven values that made Ford the leader in '54 sales gains!

MORE AND MORE buyers are switching to Ford Trucks. In fact, Ford was the *only* leading make to show increased sales in 1954 over the previous year. Why? Because Ford has consistently offered *more* of what you need to *save* money and *make* money.

And now, Ford introduces the new Money Makers! The 1955 line of Ford Triple Economy Trucks . . . with *proven* features which have already swung so many truck buyers to Ford—plus *important new refinements* to make these trucks the most efficient business tools that ever took to the road.

Ford Truck engines—the *only* complete line of modern short-stroke engines in any trucks at any price—have still better performance and greater ruggedness, with many advancements which include new 18-mm. "turbo-action" spark plugs—a Ford *first*—and new stress-relieved cylinder heads.

Ford's *Driverized* Cab, most comfortable driver-saving cab ever built, features new free-breathing *woven* plastic upholstery, exclusive seat shock snubbers and non-sag seat springs as standard. Among 17 "customized" extras in new *Custom* Cab (low added cost) are new full foam-rubber cushioning, over five soft inches deep in seat, three inches in seat back . . . and new color-keyed two-tone upholstery.

New chassis advancements make new Ford Trucks better load carriers than ever. The new "½-ton" Ford F-100 Pickup, for example, has an increased GVW of 5,000 lbs., giving it the biggest payload capacity in its field: 1,718 lbs.

Ford *Triple Economy* . . . gas-saving power; driver-saving comfort; and trip-saving capacity . . . makes a new Ford Truck the best MONEY MAKER you could have. Call your Ford Dealer now!

ales leader in its class—new Ford F-800, GVW 22,000 lbs., GCW 38,000 lbs. 170-h.p. V-8 engine. Power Steering available.

▲ **Highest payload capacity** in the ½-ton field! New Ford F-100 6½-ft. Pickup, GVW 5,000 lbs. 132-h.p. V-8 or 118-h.p. Six engine.

▲ **New Ford F-350 9-ft. Stake** carries bigger payloads with increased 7,700 lbs. GVW on single tires, 9,500 lbs. GVW with dual tires.

are here for 1955! *From Pickups to Big Jobs*

IMPORTANT ADVANCEMENTS!

To help you keep making money day in and day out

NEW higher power, new higher compression ratios, for faster acceleration with regular gas. Five ultra-modern, short-stroke engines, four V-8's and a Six!

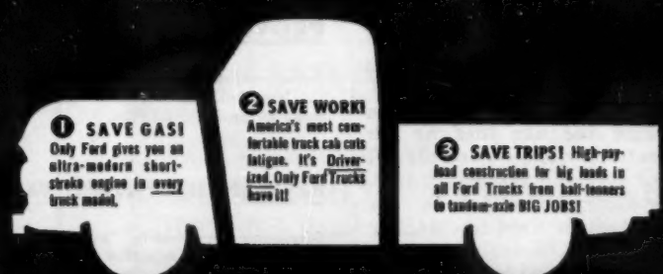
NEW longer-lived 18-mm. "turbo-action" spark plugs resist fouling with light loads, prolong peak power at full load. Tapered seat, using no gasket, provides accurate firing position for top performance. On *all* Ford engines.

NEW *Fordomatic* transmission! New automatic low gear "step-down" for faster acceleration, more power at the start. Quieter, smoother automatic shifts! Longer life! For all light duty series at worth-while extra cost.

NEW tubeless tires that run cooler, last longer, give greater protection against punctures and blowouts! Standard equipment on Courier and all F-100 models!

NEW axle capacities, new springs, longer-lived clutches! Plus many more durability improvements to keep Ford Trucks on the job, make them last even longer!

THREE MONEY-SAVING OPPORTUNITIES WITH FORD TRIPLE ECONOMY



1 SAVE GAS! Only Ford gives you an ultra-modern short-stroke engine in every truck model.

2 SAVE WORK! America's most comfortable truck cab cuts fatigue. It's Driver-ized. Only Ford Trucks have it!

3 SAVE TRIPS! High-payload construction for big loads in all Ford Trucks from half-tonners to tandem-axle BIG JOBS!

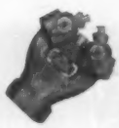
FORD Triple Economy TRUCKS

CARDOX
AQUA-JET
SPRAYER

This Unique Combination of Features Gives Better Spray Coverage with Least Waste . . .

Only CARDOX AQUA-JET gives you the combination of features you *must* have to do effective spraying with the least possible waste. Handles any spray material—bulk, semi-concentrate or concentrate—without clogging and with complete atomization at all flows. Nozzles are easily adjustable to *put spray where you want it* in the *pattern you want.* AQUA-JET replaces an entire spraying crew because one man does the job from tractor seat—controls off, on or spraying to one side only. Low weight makes pulling easy with medium sized tractor. See your CARDOX dealer or write for his name and free bulletins.

PROVEN AQUA-JET HEADS



Adjustable impinging jets give any desired pattern with lowest pressure drop—enable you to put spray exactly where you want it. Non-clogging with *any* material.

PROVEN MECHANICAL AGITATION

Assures thoroughly mixed spray material . . . from full tank to empty. No "burned" trees or too weak solution.

PROVEN HIGH PRESSURE PUMP

Gives you the powerful "punch" needed for long range projection and complete coverage.

CARDOX CORPORATION
BELL BUILDING • CHICAGO 1, ILLINOIS

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LETTERS
TO THE EDITOR

Challengers for Largest Apple Tree

Dear Editor:

In your October issue Thomas J. Davis of Kansas City, Mo., reported apple trees in Brookville, Pa., with circumferences, 24 inches above the ground, of 8′4″ and 8′5″.

On the Peter Stolich ranch near Watsonville, Calif., there are a number of large old apple trees. After reading your letter, I measured the circumferences of the three largest. The largest tree has a center that has completely rotted out to two sides and apparently the whole tree has spread apart at two feet about the ground. Consequently measurements were made at 12″, the narrowest point, and the circumference was found to be 10′4″.

Two other old trees were measured at the height that Mr. Davis used. The larger of these measured 9′2½″, and the smaller, 8′6″.

These trees are Gravensteins and from the best available information are about 65 to 70 years old.

Santa Cruz, Calif. Edward C. Koch

Dear Editor:

I have a clipping showing a Spy apple tree in Keene Township, Ionia County, Michigan, which measures 9′ in circumference at waist height. The tree is estimated to be 90 years old and has always been a good producer.

It is always a pleasure to "show" gentlemen from Missouri!

Saranac, Mich. H. R. Chamberlain

Dear Editor:

A few years ago a Summer Rambeau apple tree was blown over in Muhlenberg Township, Berks County, Pennsylvania. It was a healthy tree with a solid trunk and measured 12½′ in circumference at a height of 4′ from the ground.

Reading, Pa. John Rick

Dear Editor:

Yes, Long Island can beat for size the apple trees noted by your correspondent from Missouri.

He can be shown an apple tree on the J. Phipps estate at Old Westbury that is 8′10″ in circumstance at 2′6″ from the ground. The tree was measured in 1952 and reported in "The Trees of Long Island," a booklet published by the Long Island Horticultural Society.

Long Island Agricultural and Technical Institute
Farmingdale, N. Y. D. V. Ferguson

Pyrus Calleryana, Anyone?

Dear Editor:

I would like to know of a firm or individual from whom I could purchase some *Pyrus Calleryana* (wild pear seed). It makes good rootstocks down near the Gulf Coast. I have tried seed houses that ordinarily have this seed but they cannot supply me.

Serotina makes good rootstocks but of late years we have had difficulty getting Serotina to germinate.

Houston, Texas E. A. Peterson

Here is a customer for anyone who has Pyrus Calleryana *seed.—Ed.*

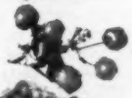
NOW IS THE TIME

to investigate CAPTAN 50-W for your '55 spray program!

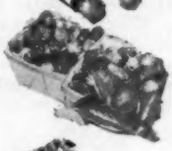
CAPTAN 50-W is recommended for:

APPLES: Apple Scab, Sooty Blotch, Brooks Fruit Spot, Fly Speck.

PEACHES: Peach Scab, Brown Rot.



CHERRIES: Leaf Spot, Brown Rot.



STRAWBERRIES: Botrytis Fruit Rot, Leaf Spots.

AVOCADOS, MANGOS: Cercospora Spot or Blotch.

PLAN – during the winter months, while you have a "breather."

EVALUATE – costs of spray materials vs. yield and grade of fruit harvested.

DECIDE – which spray materials will give you maximum disease control, greatest yield, best fruit finish, finest storage quality.

Don't make the mistake of saving a little in spray cost and losing a lot in crop value! Captan 50-W in three seasons of extensive commercial use has set a new standard for fungicides. Adopt Captan 50-W into your spray program and set a new standard for the grade of fruit your orchard produces.

Other products which Stauffer makes available include:

SULPHURS: – Magnetic "70", Magnetic "90", Magnetic "95", Crown, Perfection.

DUST BASES, WETTABLE POWDERS, EMULSIFIABLE LIQUIDS: DDT, BHC, Parathion, Malathion, Ovex, Dieldrin, Aramite, Chlordane, Systox, Toxaphene, DDD, Endrin, Heptachlor.

Send now for descriptive literature about these and other STAUFFER pesticides. *Stauffer Chemical Company, 380 Madison Avenue, New York 17, N. Y. • Sales offices in principal cities.*

Stauffer CHEMICALS SINCE 1880

---guaranteed by its name!

Here are 4 of the 8... the AIR-AGE 8

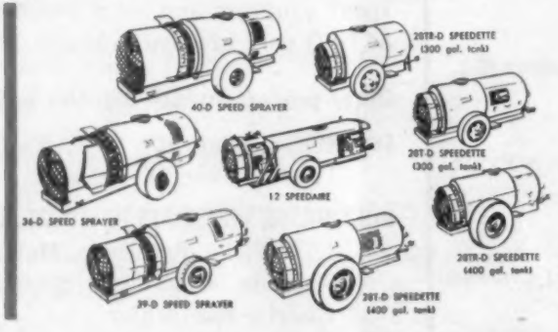
4 JOHN BEAN SPEEDETTES NOW BRING ECONOMICAL AIR SPRAYING TO EVERY MEDIUM SIZED ORCHARD

Owners of medium-size orchards or groves can save time, save labor and save spray materials with a proven John Bean Speedette air sprayer — and grow better fruit more profitably!

Spraying is a fast, one-man operation with a Speedette. You spray "on time" when it's needed most — put protection where you want it with accurate "zoned" spray patterns and simplified, easy operating controls. You get through-the-tree penetration and thorough top-to-bottom coverage that makes your spraying fully effective. And whether you spray concentrate or semi-concentrate to avoid run-off and drip, or spray dilute, your materials go further with a Speedette because distribution is uniform and particle size is closely controlled.

The range of four Speedette models provides either 300 or 400-gallon capacities and either engine power or tractor power take-off. See the Speedette of your choice in action. Ask your John Bean dealer for a demonstration.

the JOHN BEAN AIR-AGE 8 for '55



. . . EXACTLY THE RIGHT AIR SPRAYER FOR EVERY ORCHARD

Write today for the NEW John Bean Orchard Sprayer catalog.

fmc FOOD MACHINERY AND CHEMICAL CORPORATION

John BEAN DIVISION OF FOOD MACHINERY and CHEMICAL CORP.

LANSING 4, MICHIGAN • SAN JOSE, CALIFORNIA

THE QUESTION BOX

Don't be perplexed! Send us your questions—no matter how big or small. A three-cent stamp will bring you an early reply. Address: The Question Box, AMERICAN FRUIT GROWER, Willoughby, Ohio.

DWARF FRUIT TREES

Will dwarf fruit trees revert to the size of the original parent after a few years?—*Ohio*

They will not if the following precautions are taken. With dwarf trees on Malling stocks, be sure not to plant too deep. If the graft is below the ground, the top may root, thus by-passing the dwarfing part of the tree. With the Clark dwarf-type, however, this is not important since the dwarfing effect is due to an intermediate piece of "Clark Dwarf" which is placed between the root and the scion variety.

PEACHES FROM SEED

I should like to know how to plant peach seeds and get peach seedlings the following spring. Ordinarily I would plant 100 seeds and get 2 or 3 seedlings.—*Texas.*

Peach pits will germinate in 12-14 weeks if stored in moist sand and subjected to temperatures just above freezing (40°F). Nurserymen plant the seed in the fall, when nature supplies the cool temperatures and moist conditions. Freezing is not essential; in the southern states good results are obtained by keeping the pits moist from the time they are collected or, if the ground is moist by planting them soon after collection. Be sure to separate poor peach pits with aborted kernels from viable seed by dumping the pits into water. The defective ones will float. Also avoid early ripening varieties which tend to have non-viable seed.

PLANTING MACHINERY

I did not find a listing of planting machinery for strawberry plants in the July Directory issue. Where can I get such machinery?—*Minnesota*

Try the following: Elco Products Co., West Allis, Wis.; Holland Transplanter Co., Holland, Mich.; Mechanical Transplanter Co., 1150 S. Central Ave., Holland, Mich.; Oliver Crop., A. B. Farquhar Div., 400 W. Madison St., Chicago 6, Ill.

Lynchburg Planter Mfg. Co., Lynchburg, Va., makes a hand transplanter.

PEARS

Should pears be picked before they ripen, and if so, what are the best conditions for ripening after picking?—*Iowa.*

For best quality, pears should be picked in a slightly green stage. They must have developed sufficiently to reach highest quality when ripened off the tree but not so mature as to impair the quality of the ripened fruit. It is best to ripen pears at a temperature between 60° and 70° with the humidity between 80 and 85 per cent. If pears are ripened above 70° they may not soften properly and will remain slightly firm until decay or breakdown sets in.

SIZING RINGS

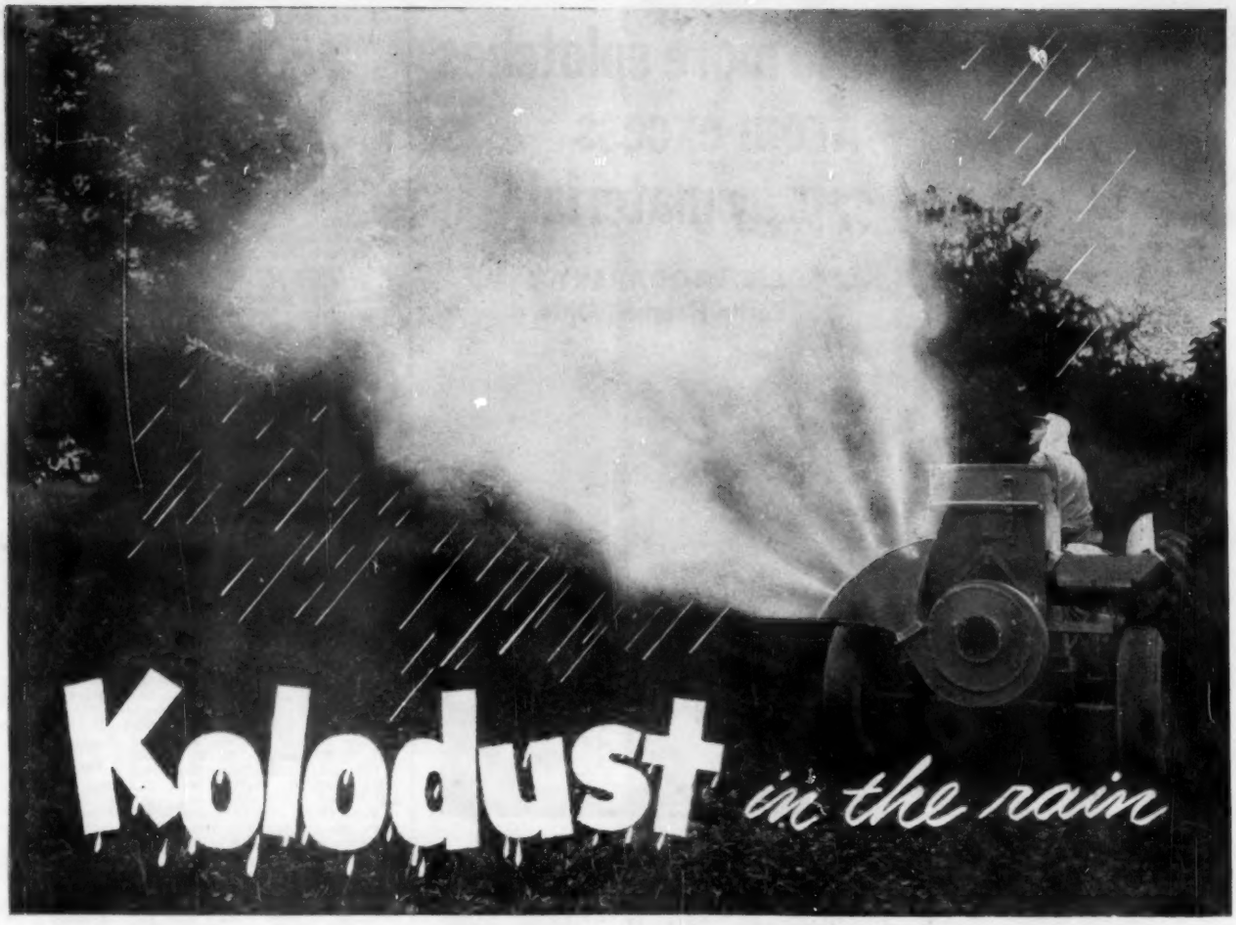
Where can I obtain sizing rings?—*New York*

John Bacon Co., Gasport, N. Y.; Salt Lake Stamp Co., Salt Lake City, Utah; Tyson Orchard Service, Flora Dale, Pa.; Webster Basket Co., Webster, N. Y.

DUG WELLS

I have misplaced my copy of a 1952 issue which contains an article about a man who has had success with dug wells and describes construction methods for them. Can you give me some information on this?—*Pennsylvania.*

We have sent our Pennsylvania reader a copy of the story telling how an oldtimer digs wells.



Stop Scab Trouble Before It Starts

It's in the Bag!

Non-caustic Kolodust contains fused sulphur absorbed into bentonite by an exclusive Niagara process to produce a highly penetrating toxic dust that sticks to foliage and fruit through prolonged and heavy rains. There is "no just as good" substitute—don't risk anything less than exclusive Kolodust.

Scab spores are most active in the rain. So is Kolodust. For Kolodust is the *only* material that cuts through the raindrops and sticks to foliage, buds or fruit both during and after the storm.

There's no more *gentle* orchard protecting material than Kolodust. It is non-caustic and absolutely safe. Trees dusted with Kolodust function normally. Users benefit from larger leaves, a smoother fruit finish and more buds for next year's crop.

Here's another advantage. Kolodust, when applied with a powerful Niagara duster, *goes on fast*. Applications can be timed for maximum kill of scab spores during periods when ground conditions bog down sprayers.

Better growers everywhere *Kolodust in the rain*. They get timely protection when it counts. They consistently harvest a heavy crop of finer finished fruit.

Niagara INSECTICIDES, FUNGICIDES, AND ORCHARD DUSTERS

Niagara Chemical Division

FOOD MACHINERY AND CHEMICAL CORPORATION

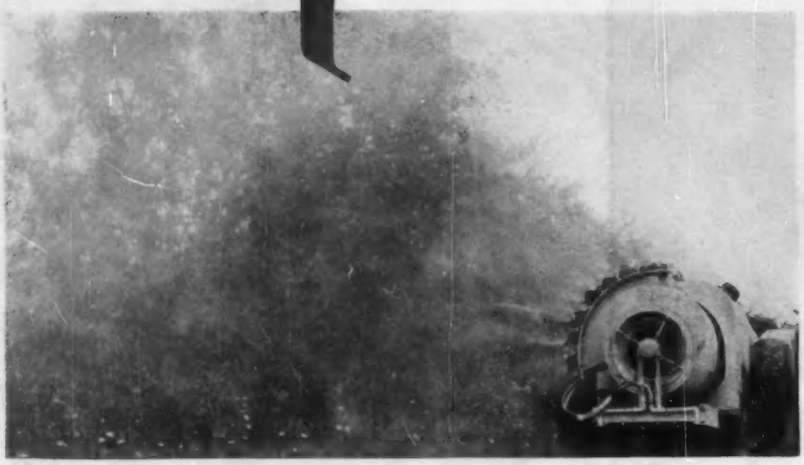
Middleport, New York, Richmond, Calif., Jacksonville, Fla., Tampa, Fla., Pompano, Fla., Wyoming, Ill., New Orleans, La., Ayer, Mass., Harlingen, Tex., Pecos, Tex., Yakima, Wash. *Subsidiary:* Pine Bluff Chemical Co., Pine Bluff, Ark. *Canadian Associate:* NIAGARA BRAND SPRAY CO., LTD., Burlington, Ontario

WHEN YOU BUY Niagara YOU BUY PROTECTION* fmc

*Trade Mark

"No more splotches from excess spray material,"

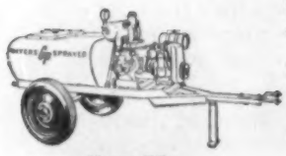
says E. E. WLODARSKY, Berlin Heights, Ohio



The investment made by Ed Wlodarsky in a Myers Concentrate Sprayer is paying off handsomely in extra income from fancy fruit and substantial operational savings. As he puts it, "I get more uniform fruit finish on peaches and apples and higher quality means higher prices."

Myers Concentrate Orchard Sprayer

Before he adopted a concentrate program, he tried two different methods of orchard spraying—a multiple spray-head rig and hired help using high-pressure guns. Both of these dilute spray programs produced satisfactory results but were expensive in terms of time and labor. Then he switched to a Myers Concentrate Sprayer and completely eliminated the need for hired spraying help and cut his spraying time two-thirds.



Myers GP General Purpose Sprayer

Similar experiences are being reported by other leading growers all over the country. But why not see for yourself? Your Myers sprayer dealer will gladly demonstrate the Concentrate Sprayer in your own orchard. Call him today.

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CALENDAR OF COMING MEETINGS & EXHIBITS

Jan. 3-4—Missouri State Horticultural Society annual meeting, Columbia.—W. R. Martin, Jr., Sec'y, Columbia.

Jan. 4-6—Massachusetts Fruit Growers Assn. 61st annual meeting, Worcester.—A. P. French, Sec'y, Amherst.

Jan. 5-6—Maryland State Horticultural Society 57th annual meeting, Hagerstown.—A. F. Vierheller, Sec'y, College Park.

Jan. 6-7—Kentucky State Horticultural Society winter meeting, Louisville.—W. W. Magill, Sec'y, Lexington.

Jan. 6-7—North Carolina State Apple Growers Association first annual meeting, Asheville.—T. T. Hatton, Ext. Hort. Spec., Raleigh.

Jan. 7-8—Western Colorado Horticultural Society winter session, Mesa College, Grand Junction.—L. L. Mariner, Sec'y, Grand Junction.

Jan. 11-13—Indiana Horticultural Society annual meeting, Murat Temple, Indianapolis.—R. L. Klackle, Sec'y, West Lafayette.

Jan. 15-22—Florida Citrus Exposition, Winter Haven.

Jan. 18-20—Maine State Pomological Society annual meeting, Lewiston Armory, Lewiston.—F. J. McDonald, Sec'y, Monmouth.

Jan. 19-21—New York State Horticultural Society annual meeting, Rochester.—D. M. Dalrymple, Sec'y, Lockport.

Jan. 24-26—Virginia State Horticultural Society 59th annual meeting, Hotel Roanoke, Roanoke.—John F. Watson, Sec'y, Staunton.

Jan. 27—Berry Growers Institute meeting, La Crescent, Minn.

Jan. 24-29—New Jersey Farmers Week, Trenton—Fred W. Jackson, Director, Div. of Inf., Dept. of Agr., Trenton 8.

Jan. 26-28—New York State Horticultural Society eastern meeting, Kingston.—D. M. Dalrymple, Sec'y, Lockport.

Jan. 31-Feb. 3—United Fresh Fruit and Vegetable Association annual meeting, Hotel Commodore, New York City.—Association headquarters—777 14th St., N. W., Washington 5, D. C.

Feb. 1-2—New Hampshire State Horticultural Society annual meeting, Highway Hotel, Concord.—E. J. Rasmussen, Sec'y, Durham.

Feb. 9-11—Ohio State Horticultural Society annual meeting, Neil House, Columbus.—C. W. Ellenwood, Sec'y, Wooster.

Feb. 10-11—Idaho State Horticultural Society 60th annual meeting, Hotel Boise, Boise.—Anton S. Horn, Sec'y, Boise.

Feb. 10-12—West Virginia State Horticultural Society 62nd annual convention, Martinsburg—Carroll R. Miller, Sec'y, Martinsburg.

Feb. 14-16—National Peach Council annual meeting, in joint session with Pennsylvania State Horticultural Assn., York, Pa.—M. J. Dorsey, Sec'y, NPC, 1502 S. Lincoln, Urbana, Ill.; John U. Ruef, Sec'y, PSHA, State College, Pa.

Aug. 16-20—Centennial of Farm Mechanization, Michigan State College, East Lansing.—A. W. Farrall, Head, Agr. Engr. Dept., MSC, East Lansing.

A NEW BOOK ON PRUNING

The Pruning Manual (Macmillan Company) by Everett P. Christopher is the successor to the book by the same title which was written by Liberty Hyde Bailey and which has been the standard reference in its field for more than half a century. The new book carries an introduction by Dr. Bailey.

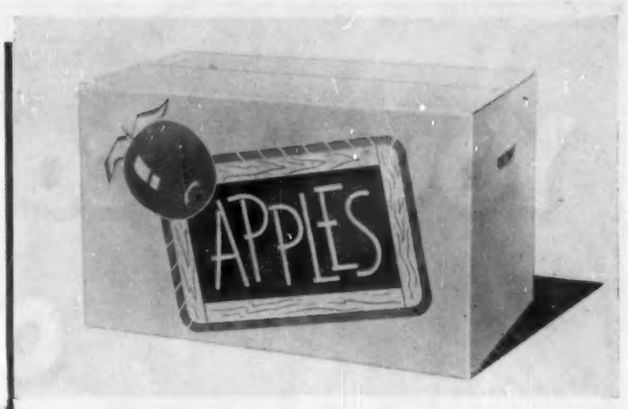
Specific instructions are given for the pruning of tree fruits, grapes, and brambles, also shade trees and ornamental shrubs, together with an explanation of plant growth in relation to pruning. Grafting, root pruning, wound treatments, and tools are thoroughly covered. Nearly 200 diagrams and photographs help to make the book an invaluable one for every fruit grower.

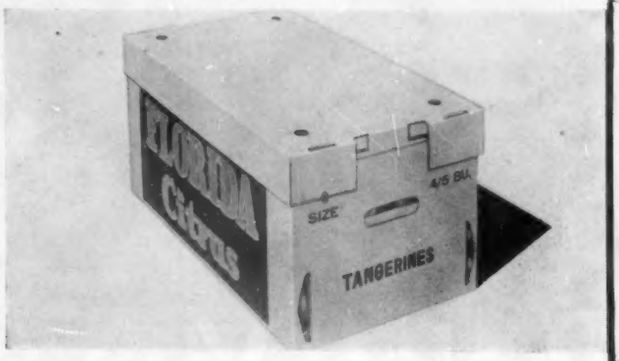
Mr. Christopher, author of the book, is head of the department of horticulture, University of Rhode Island. The book sells for $5.

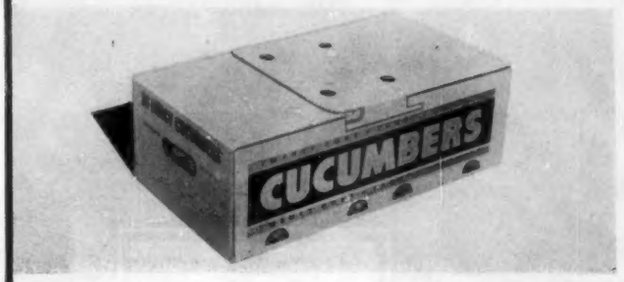
Books on fruit growing and allied subjects may be ordered through AMERICAN FRUIT GROWER, Willoughby, Ohio. Remittance must accompany the order.

BETTER WAYS TO SHIP FRUITS AND VEGETABLES

with New UNION Corrugated Shipping Containers . . .







TANGERINES

Built-in air channels provide complete ventilation. Special side wall construction, triple-thick ends, and sulphur-impregnated board give this box a high degree of rigidity. Lid lock permits bulge packing. Recessed construction creates a channel for vertical air circulation when boxes are placed end to end. Box makes up entirely by hand. Needs no stitching or fastening devices.

APPLES

This master container accommodates nine 5-lb. bags of apples. Inner divider separates box into three compartments. Gap between flaps provides maximum top-to-bottom ventilation. Body is made with Union's Super-Stak corrugating medium which enables box to withstand high humidity conditions encountered in cold storage.

TOMATOES

Money-saving dual-purpose box in which you ship green tomatoes to the repacker, who then uses the same container for shipping standard 1-lb. tubes of ripe tomatoes. Body is made with sulphur-impregnated board which provides high rigidity under refrigeration. Lid is easily closed and reopened without the use of clips or other metal pieces. Wedge cuts in the lid flanges allow the lid to bulge without distortion.

CUCUMBERS

Easy to set up one-piece box which requires no stitching or sealing equipment. Special self-locking cover may be opened and closed repeatedly with a minimum of effort. Double ends and triple sides provide great stacking strength for shipment and storage. Box holds 24 cucumbers. Made in Pony and Jumbo sizes.

Ask for additional information about these new shipping containers and how produce men are now using them to increase profits.

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My Recollections of

50 YEARS IN THE APPLE BUSINESS

Harry Flood Byrd, the youngest of three brothers, made his fortune in the apple business. Today he has 4,000 acres in apples, with the home orchards located just outside of Berryville, Va. He is a leading American statesman, being United States Senator from Virginia since 1933 and before that Governor of the State of Virginia. A fruit grower since the age of 17, Harry Byrd is a keen student of apple production practices. Each year he gives a picnic at Berryville which has become a tradition, and it was to the several thousand fruit growers attending last summer's event that the remarks reproduced here were directed.—Ed.

Our largest and most successful apple grower looks back over a half century of achievement

FIFTY years ago I went into the apple business and today I feel a great satisfaction about being an apple grower. For one-half of my 50 years, we were on an export basis. This area exported half its production and every fall there were many buyers from the United Kingdom.

I believe the greatest crisis in the apple business was in 1930. We not only had the depression to contend with but also a disastrous drought. To make matters worse, England went off the gold standard and set up a tariff on our apples of $1.50 a bushel. The outlook was dark, but two things occurred that saved the apple business. One was the discovery of color sports and the other was the industrial development of the South.

Color sports enabled us to wrap our apples in competition with the West, and the development of the South created new outlets to take the place of the loss of our export markets.

The future today looks encouraging. One reason for optimism is that in the apple business we have a new deal each year. We cannot carry over our product from year to year, building up surpluses to threaten our markets. If we have a loss, we must take it when it occurs.

Another thing in our favor is that we are not subsidized. Power follows the purse. I am proud that apple growers have held out against subsidies. We are better off as free, independent Americans, owing no obligations, and achieving success through the diligence of our own efforts.

Harry F. Byrd

APPLES

Orchards are in excellent condition for another good crop. Moderate replacement planting urged

By J. R. MAGNESS
U. S. Department of Agriculture

THE commercial apple crop of the United States in 1954 was estimated by the USDA on November 1, 1954, as 103,716,000 bushels. This crop is nearly 11 million bushels larger than the short crops of 1952 and 1953. It is, however, about 2 million bushels less than the 10-year average (1943-52).

In the New England states, the 1954 crop was very near the 10-year average but was 20 per cent less than the heavy 1953 production. The crop of McIntosh, the leading New England variety, was light in 1954 following the heavy 1953 crop. Other varieties, particularly Baldwin, produced heavily in 1954.

In New York and New Jersey, the 1954 crop was appreciably above the 10-year average and also well above

PRODUCTION—ALL APPLES—Million Bushels

1943-52	106	1953	93
1952	92	1954	104

the 1953 crop. In Pennsylvania, the crop was nearly average in size but well above that of 1953.

In five South Atlantic states—Delaware, Maryland, Virginia, West Virginia, and North Carolina—there was a bumper apple crop in 1954. It was 27 per cent above the 10-year average and 50 per cent larger than in 1953. The crops on all varieties except Stayman were heavy. Stayman bloom and set were relatively light.

The Central states produced in 1954 a crop about 15 per cent below the 10-year average and well below the crop of 1953. Ohio and Indiana had near-average crops, but those of Michigan and Illinois were well below average.

Low Yield in West

The western states had the third successive crop that was much below the 10-year average. In this area as a whole the crop was about 14 per cent less than the 10-year average and only slightly above the light 1953 crop. The low yield in the western states was largely the result of the short crop in Washington, which normally produces more than one-quarter of our commercial apples. A very severe freeze occurred in Washington and Oregon during the last week of

April and greatly reduced the crop, especially in Delicious orchards. Delicious is particularly susceptible to spring frost injury. Since, in a normal year, more than half the apples in Washington are of the Delicious variety and its strains, the relatively short crop of this variety in Washington largely accounts for the loss of production in the western states as a whole.

In the western states, the bloom season was late and the growing season was one of the coolest on record. Late varieties, particularly, did not attain quite the size usually found in irrigated orchards, probably because of the shorter growing season and the sub-normal temperatures. In the southern part of the eastern apple belt, severe drought conditions were prevalent. The size of the fruit and the tonnage were reduced by lack of moisture in such areas as Missouri, southern Illinois, Kentucky, southern Virginia, and North Carolina. In general, growing conditions were good in other apple-producing areas.

Hurricane Apples Mostly Salvaged

Hurricanes which swept through New England in September and Hurricane Hazel, which swept across parts of Virginia and Maryland, West Virginia, Pennsylvania, and southern New York on October 15, blew many apples from the trees. Much of the fruit was salvaged. There was some tree damage consisting of trees blown over or loosened in the ground and breakage of large limbs. The injury

is not expected to affect production appreciably in the years ahead.

The 1954 crop was one of the cleanest on record from the standpoint of insect and disease damage. Weather conditions on the whole were favorable for disease control. Many orchardists are now equipped with semi-automatic spray machines with which they can cover the orchards rapidly; thus, timing of sprays has been improved. Also, the insecticides and fungicides now available have proved highly effective in pest control with a minimum of injury to the fruit and foliage.

Outlook for 1955 Excellent

On the whole, apple orchards will go into 1955 in excellent condition to produce full crops in that year. Most of the orchards have received excellent care during the past two or three years. They have been well-fertilized and pruned and are as free of insect and disease pests as they have ever been.

Barring unusual winter conditions, the bloom of McIntosh in New England and New York will be relatively heavy. Bloom on Baldwin will probably be light following the heavy crop of 1954.

Most varieties in New York and Pennsylvania, where near-average crops were produced in 1954, will probably have adequate bloom in 1955. In the Shenandoah-Potomac Valley areas, there should be heavy bloom on Stayman; bloom on York Imperial will probably be lighter than in 1954. The bloom in this area as a whole may be somewhat lighter in 1955 following the relatively heavy production in 1954.

Trees in the Central and western states undoubtedly will have enough bloom to produce larger crops in 1954 than during the current year. Michigan, the leading apple state in the Central area, and Washington, which normally produces about two-thirds of the crop of the western states, both produced light crops in 1954. Larger crops in 1955 are therefore probable.

The size of the crop in 1955, however, will largely be determined by winter and particularly spring weather conditions. We still have enough apple trees to produce a crop of 120 to 125 million bushels when conditions are favorable in all important producing areas. How nearly the crop approaches such a figure in 1955 will depend largely on whether winter injury occurs and especially on the conditions for pollinating the bloom and whether widespread frost damage occurs this spring.

The Long-range Prospect

The apple industry is now well-adjusted to market demand. When production is near the average, the efficient apple grower can expect a good return for his work and investment. Even crops moderately above average can be marketed satisfactorily. At present, the apple-producing capacity is not larger than the country's needs. Of course, in the exceptional year when there are large crops in all areas, difficulty is likely to be experienced in moving the crop into consumption at prices that will net production costs and a little more.

No up-to-date and accurate figures are available on the extent of new orchard planting during the past three or four years. Most of the planting is being done by experienced orchardists and largely to replace acreages where the trees are becoming old and need to be replaced soon. There is no indication at present of an excessive amount of new planting. There is probably relatively more in Washington than in most eastern areas. Certainly, with a rapidly expanding population, apples at present are not over-planted.

We believe, therefore, that orchard owners are well justified in giving their orchards the best care possible. Pruning, fertilization, and spraying certainly should not be neglected. Growers having orchards on shallow soils in eastern states can well study the possibility of supplemental irrigation. In many orchards it is feasible, and in many years will increase fruit size and total yield. In many orchards, more mulching may be desirable. It is a good time for orchardists to build their orchards to peak production of quality fruit. Moderate planting to replace acreage growing old appears well justified. THE END

A New Method of Printing AMERICAN FRUIT GROWER

As you read this, our first issue for 1955, you will notice a new look to AMERICAN FRUIT GROWER. We are greeting the New Year and each of our fruit-growing subscribers with a magazine offering many improvements.

For 20 years AMERICAN FRUIT GROWER was printed by rotogravure, which was particularly effective in reproducing illustrations of colorful fruit. Now, however, changes in the printing industry have made it possible for us to shift to high-speed rotary letterpress.

Improvements in letterpress equipment and plate making will make it possible to continue the excellent reproduction of fruit illustrations and at the same time streamline and speed the production of our magazine. A wider latitude in the selection of colors is also permitted.

Letterpress printing will also bring to our readers clearer type impressions with a newer and fresher look.

Much time and planning by the best brains in the printing industry have made these changes possible, and we are confident you will find AMERICAN FRUIT GROWER more readable, attractive, and up-to-date than ever before.

CITRUS

Texas makes big strides toward recovery from 1950 freeze; cartons revolutionize industry in California

TEXAS SETS MILLION GRAPEFRUIT TREES

By W. H. FRIEND

Associate County Agent
Lower Rio Grande Valley

CITRUS orcharding in Texas still has its appeal. Planting from June, 1951, to June, 1954, averaged about half a million trees a year. More than a million nursery trees were ready for planting in orchard form at the start of the present planting season. The heavy demand (about 80 per cent) continues to be for grapefruit trees of the red-fleshed varieties.

Developers of Texas orchards are making a bid for a share of the fresh grapefruit market, as the supply of grapefruit and oranges for processing appears to be more than adequate. They are counting on the eye appeal of red-fleshed grapefruit to attract customers, and they believe that the mild flavor of Texas grapefruit will bring repeat orders. A very acceptable pink-colored frozen concentrate has been made from the unmerchantable grades of Texas red-fleshed grapefruit.

Production from the 1954 bloom is placed at about 6 million boxes. Next year's crop should reach 10 million boxes if favorable conditions continue. An assured reserve of irrigation water behind Falcon International Dam and favorable conditions during 1954 caused a revival of landowner interest in citrus orcharding despite the pre-Christmas slump in fruit prices.

It costs from $300 to $400 to set an acre of valley land to trees and then care for them until they are able to pay their own way—if there happens to be a profitable outlet for fruit when the trees start fruiting. Texas orchardists are not greatly concerned about production difficulties except freezes, but they are worried about the high prices charged for fresh fruit at consumer levels. Citrus growers are fearful that the 1,000 per cent spread between the orchard price and consumer price of fruit may price the commodity out of the reach of the vast majority of prospective consumers.

PRODUCTION—ALL CITRUS—Thousand Boxes

	1943-52	1952	1953	1954
ORANGES				
Florida	58,580	72,200	91,300	91,000
California	46,385	46,030	32,460	41,200
Texas	3,211	1,000	900	2,300
Arizona	1,016	900	1,170	1,400
Louisiana	271	50	100	175
GRAPEFRUIT				
Florida	30,340	32,500	42,000	36,500
Texas	13,631	400	1,200	3,700
Arizona	3,260	3,000	2,670	3,500
California	2,803	2,460	2,500	2,420
TANGERINES				
Florida	4,410	4,900	5,000	5,400
LEMONS				
California	12,493	12,590	16,130	14,600
LIMES				
Florida	230	320	370	400

FLORIDA PRODUCTION KEEPS GOING UP

By FRED P. LAWRENCE

Florida Extension Service

THE total United States citrus production was 179,150,000 boxes in 1953-54, including all oranges, tangerines, and grapefruit. Of this total Florida produced 138,300,000 boxes or an increase of 28 million boxes over the 1952-53 season.

The tremendous increase in Florida production has resulted naturally from such factors as increased planting, good growing conditions, and increased bearing surfaces of young and old groves. This increased production has also resulted from better cultural practices such as improvements in nutrition and insect and disease control.

From the grower's viewpoint such new practices as hedging which opens up the tree rows to sunlight, concentrate sprays, budwood certification and the use of more of the new organic insecticides and fungicides were of paramount importance in the 1954 season.

A recent development in agricultural machinery which benefited the grower was the bulk handling of fertilizers. The fertilizer formulas, mixed at the plant, are delivered to individual groves in specially designed and built "hi-boy" dump trucks which are divided into compartments equal to the capacity of field truck distributors.

The concentrate spray machine has also been of great value this past season. Through its use the grower needs only one-sixth to one-eighth of the quantity of water used in dilute sprays. This sprayer not only eliminates the need for so much water but also gives a uniform and effective coverage.

Florida's budwood certification program gained new impetus this season with the addition of 348 parent trees into the program.

Nematode Problem Spreads

All of the 1954 production picture was not favorable from the growers' viewpoint, however. Spreading decline continued to take more trees out of production; the latest Florida State Plant Board figures show there are more than 3,000 acres affected by the malady, which appears to be the result of the burrowing nematode *(Radopholus similis.)* Some growers

have been combating this menace by the "pull and treat" method, i.e., by bulldozing and burning the affected trees and treating the soil with fumigants. Others have established barriers, hoping to prevent the spread through the use of soil fumigants.

According to the USDA crop estimate the 1954-55 crop of early and mid-season oranges is about 10 per cent larger than production in 1953-54. Crops are larger in all citrus states this year, with Florida having a record 54 million boxes of early and mid-season oranges.

Condition of the Florida crop is good with the exception of grapefruit where a reduced production exists. The new grapefruit crop in Texas where trees planted since the 1950 freeze are beginning to bear, offers rather sharp competition to the Florida fruit.

New fields of consumption are opening up to supplement the consumer demand for fresh fruit and the demand of the processing plants. Concentrated orange powder, pink and red grapefruit concentrates which maintain their color, and the radiation

treatment of fresh juice that enables it to be shipped without refrigeration are some of the new ways citrus fruits are being presented.

Even with expanded consumption, however, the emphasis during the next few years will have to be placed on good grower practices and a reduced cost per box as the margin of profit will probably decrease.

CALIFORNIA WORRIED ABOUT QUALITY

By PHILLIP H. CASSIDY

Mutual Orange Distributors

THE 1954 citrus season in California has been aptly described as one of great travail. Particularly is this term applicable to the Valencia orange season which produced one of the shortest crops in years. The many off-blooms and general irregularity of the crop materially increased the costs of picking and packing, but in spite of these higher expenses, Mutual Orange Distributors reported a half-million-dollar gain in the market value, f.o.b. packing-house, of fresh citrus sales during the year.

Color Problem of Valencias

Not only was the total crop of Valencia oranges one of the smallest in years, but it was disappointing from a quality standpoint. Because of the erratic behavior of the trees in setting fruit at different times during the growing season, the market was plagued with off-bloom oranges. This was a factor over which the industry had no control and only the shortage of fruit kept prices at a satisfactory level.

Because of the little-known fact that fully mature Valencia oranges, if left on tree, will start to turn green again, there was buyer resistance to some of the fruit because of color. While this year's crop did not appear to contain a greater percentage of green-tip fruit than any previous season, still the short crop and relatively high prices combined to spotlight this odd behavior quirk of the Valencia orange.

Some method of enhancing the eye appeal of California oranges will have to be developed. Florida solved a similar problem years ago through color-adding, and today practically 70 per cent of their Valencia oranges go to market with color-added.

The 1954 season saw the California citrus industry once more operating under prorate control after a one-year lapse, during which shipping was governed by the natural law of supply and demand. After public hearings were held, a vote of the growers resulted in the adoption of virtually the same marketing agreements and orders for each variety as had previously been in force.

A more aggressive field program to improve the production and quality of California citrus fruits is a necessity. Even though the citrus acreage is still declining as subdivisions continue to take over agricultural lands, the industry can, and should, produce more and better fruit on the remaining acres. There are many problems still unsolved in connection with old groves, such as various tree diseases to combat, irrigation problems, and water shortages to overcome.

Cartons Revolutionizing Industry

There has been a greater swing to packing in the half-box-size cardboard carton than was thought possible in the short period of time since its introduction to the industry. California's lemon packing houses have converted almost 100 per cent to automatic or semi-automatic volume filling of cartons and this has resulted in substantial savings to growers. There still remains the minor problem of irregular counts of fruit in the cartons. The development of a completely automatic electronic counter will eliminate this problem, and at least three sources are attempting to perfect such a device.

During the 1954 season almost half of the orange crop was packed in cardboard containers. Precooling oranges in cartons, prior to shipping, is a recent development which shows considerable promise. Several pack-

(*Continued on page* 42)

PLUMS and PRUNES

Bad weather again plagued growers but market prices were favorable

By CLARON O. HESSE
University of California

MAJOR plum and prune production areas have been plagued by disastrous weather during the past several years. Winter damage and spring frosts have affected Northwest production, and California's erratic production has been caused largely by adverse weather conditions.

PRODUCTION—PLUMS AND PRUNES—Thousand Tons

	Average: 1943-52	1952	1953	1954
PLUMS				
California	80	53	86	72
Michigan	5	8	6	6
PRUNES				
California	446	338	365	460
Washington	21	17	22	13
Oregon	68	45	48	42
Idaho	22	24	20	13

Growers have probably profited from the more favorable demand-supply situation resulting. A quick return to near maximum production levels might prove fully as disastrous as the adverse weather.

It is not probable that production will attain record levels in all regions in 1955, but with favorable weather the Northwest will undoubtedly increase plum and prune production materially. California prune production was above average in 1954, and is expected to run about normal in 1955. California's shipping plum crop was definitely light in 1954; production in 1955 can be expected to be large, perhaps exceeding favorable market quantities during parts of the season. Michigan production, while small, will probably increase somewhat if weather factors are favorable.

Canned Production Is Higher

Production districts suffered in varying degrees in the 1954 season. Eastern Washington, Eastern Oregon, and Idaho were particularly hard hit by frost, and fresh shipments from these districts were correspondingly light. Western Washington and Oregon, on the other hand, produced at nearly normal levels, much of this production going into cans, so that canned production in the Northwest was slightly higher in 1954 than in 1953.

The San Joaquin Valley districts, which grow the largest acreage of early varieties of shipping plums—Beauty and Santa Rosa—were favored with more nearly normal production in 1954 than the foothill and Sacramento Valley areas. Sizes, especially of the Santa Rosa variety, were not up to expectations, so that the market for the early varieties was weaker than for the heavier production of 1953.

Later varieties, for which production is relatively heavier in the foothill and Sacramento Valley districts, were particularly short, but sizes were good. These factors strengthened the late plum market to the extent that the season average for all varieties exceeded the 1953 average by 57 cents per 4-basket crate, being $4.64.

Fruit Size Is Problem

The principal production problem for California plum and prune growers is to produce fruit of adequate size. Good commercial sizes have consistently brought favorable returns during the past few seasons. All of the 1953 prune carry-over was of small sizes, and a high percentage of small sizes was produced in 1954. If weather is favorable for prunes in 1955 this problem will become more acute.

To avoid excessively large sets, which is a basic cause for small fruit size and poor quality, growers may be more inclined to take the calculated risk of blossom spray thinning to regulate crop. Widespread use of blossom thinning might reduce total crop slightly, but to the advantage of the grower by increasing average fruit size.

Advertising Is Stepped Up

On the positive side, the Northwest has launched a successful "purple plum" program to expand the use of their unique Italian plum production. California growers have initiated and are carrying on expanded advertising programs, especially for prunes, for which an intensive program will be carried out in nine major market areas. In the case of prunes, this has happily been accompanied by a concerted effort for quality production.

Mechanization Lowers Cost

Continued experimentation with ways of mechanizing the prune harvest is gradually having the desired effect of lower production costs.

A small demand for plums and prunes for freezing continues, but the advance in prune juice output is highly encouraging. These outlets will undoubtedly be maintained or slightly expanded in 1955, but will remain only supplementary to the historic outlets. THE END

PEACHES

Removal of freeze-damaged trees keeps production near normal. Replacements favor new varieties

By M. J. DORSEY
National Peach Council

WHEN the "guesstimate" for the 1954 peach crop was released by the National Peach Council on February 15, it was apparent that nearly all of the principal peach regions had come through the winter months with enough fruit buds left for a fair crop. Spring frosts, poor pollinating weather, and frost hazards reduced the crop prospects somewhat, but as the season came on we saw that we were approaching the harvest period with our usual volume of somewhere near 63 to 64 million bushels.

Midsummer hail further reduced the volume in some of the eastern states, and early spring freezes and frosts took their usual toll in others. Some areas, such as Washington, came through with more volume than was expected earlier in the season.

Weather a Bugaboo

The most critical situation, however, developed in some of the midwestern and southern states in the summer months, due to unusually dry weather. On the other hand, in some states, such as Michigan, there was an excess of moisture during considerable portions of the summer. All told, weather extremes—hot, dry, and wet—presented the industry with some serious production and marketing problems.

The final results of the severe winter injuries of 1949-50 are now evident and are borne out by the extensive tree removal programs in many states. Before that time we were accustomed to expecting a possible crop of nearly 100 million bushels.

As a result of this great reduction, there is increased interest in both the East and West in new plantings —at least to the point of taking care of these replacements. Many nurserymen this fall report a complete sellout, especially in the South, where there is a decided swing to new color varieties ripening before Elberta. Some of the older varieties such as Golden Jubilee and Halehaven are still losing ground to newer offerings with more color and better timing in the marketing season.

One noticeable tread in the peach industry generally which has taken place during the last four or five years is the gradual shift toward larger units. The management problem, together with the desire to make

better use of expensive equipment both in production and marketing, have tended to make the overhead in the smaller units excessive and difficult to carry. This trend is obvious in the more favored regions where higher yield and more continuous cropping have made it difficult for the less favored regions to compete.

Another item to be noted in the recent progressive steps in marketing peaches is quick cooling. During this past season increased use has been made of hydrocooling or stericooling, especially in the South. If the present trend continues, we may expect this process to become standard practice in marketing peaches.

Promotion Is Stepped Up

There have been important changes in procedure in handling the peach. National and local promotion and advertising have gradually achieved a standard procedure through such avenues as the local press, radio and television publicity, posters and material supplied to retail outlets and food editors. Nearly all peach states are conducting active promotional campaigns during the periods of their heaviest volume.

PRODUCTION—ALL PEACHES—Million Bushels

Average: 1943-52	67	1953	64
1952	63	1954	61

We have often pointed out the natural advantages of ripe peaches. The very word "peach" has its own connotation in our culture. On the other hand, we have been slow in the trade to take full advantage of the beauty and natural appeal of the peach as assets to faster movement in the retail outlets. Students of marketing are giving this matter critical study and wherever the peach has been presented at its best in an attractive pack, sales have increased.

It would seem that greater cooperation between the grower and retailer would pay good dividends for both groups. THE END

CHERRIES

Red cherry growers wary about expansion; packing costs put sweets in luxury class

A GOOD YEAR FOR SWEET CHERRIES

By W. A. LUCE

County Agent, Yakima, Wash.

GROWERS of sweet cherries generally had a good year in 1954. The total crop during the year was about average in the West but somewhat lighter than usual in the Pacific Northwest. Spring frosts accounted for the loss. More and more orchards in Washington are being heated to protect them against low temperatures. There has been no heavy planting of trees.

The picture in Oregon may not be as bright. Reports from The Dalles indicate a switch from cherries to apples due to virus trouble. Montana and Idaho will probably hold their own but not increase very much during the next few years.

California should continue to be a heavy producer of sweet cherries.

The threat of virus has limited the planting of sweet cherry trees during the past 10 years. The "little cherry"-Western-X complex has been feared in Washington and Oregon while similar viruses "buckskin" and "albino" have threatened sweet cherry plantings in California and southern Oregon, respectively.

Lambert mottle now looms as a serious virus in Washington and Montana. And probably an equally serious virus, "twisted leaf," is putting many sweet cherry trees on the woodpile in Washington.

Winter injury has taken a heavy toll of old trees in the Northwest. Most serious of the freezes was the 1949-50 low temperatures that started the decline in many of the older trees.

PRODUCTION—SWEET CHERRIES—Thousand Tons

1943-52	92	1953	92
1952	100	1954	93

High cost of packing sweet cherries in the Pacific Coast states has put them in the luxury class. The high prices paid for 9- and 10-row cherries does not correctly indicate the real value of that fruit in comparison with cherries sold as 11- and 12-row. Perhaps eventually the consumer package may solve this problem.

Sweet cherry growers look forward to the time when new varieties will be available for planting. New hybrids are being tested. The names of Van, Sam, Ebony, Spaulding, and Lamida are mentioned as varieties of the future.

FREEZE CUTS RED CHERRY CROP

By CLARENCE MULLET

District Horticultural Agent Traverse City, Mich.

RED cherry growers are watching the rapid development of their industry with considerable interest and some apprehension. The average national red cherry production was up 47 per cent in the period 1950-54 as compared to a similar period 10 years earlier.

These factors, combined with the 24 million-pound carry-over of processed cherries from the good crop year of 1953-54, are reasons for growers to stop and consider production and marketing plans for the future. The industry was saved from

PRODUCTION—SOUR CHERRIES—Thousand Tons

1943-52	108	1953	132
1952	118	1954	104

the doldrums of excessive production in 1954 by the unusual May freeze in northern Michigan and Wisconsin. Estimated loss in northern Michigan was 65 to 75 million pounds. This freeze factor has from time to time saved the industry from excessive carry-overs.

The coming years will undoubtedly find more cherry production than has been true in the past. Trees already planted, following the favorable years since the late 40's, will greatly exceed the old orchard replacement needs. Better cultural practices will tend to lift production from the 10-year average of about 2¼ tons of cherries per acre, as reported by the Michigan Crop Reporting Service. This will be accomplished with better fungicides and insecticides, and the use of complete fertilizers which leaf analysis indicates is often needed.

Growers are faced with increased problems in the fields of virus, root rot, and new insects.

Water transportation of cherries from the farm to the processor and the "Light Syrup" pack hold considerable promise for economy of labor and quality. THE END

PEARS

Increased demand for fresh and canned pears is reflected in light of research activities

By L. L. CLAYPOOL
University of California

MOST of the commercial pear production of the United States is concentrated in the three Pacific Coast states. Utah and Colorado have increased their production but are a relatively minor factor in total tonnage.

The 1954 pear crop was somewhat larger than estimated. Although Oregon and Washington were below 1953 figures, California had a record crop. Bartlett pear production in California hit an all-time high, estimated to be about 339,000 tons of commercially marketed fruit, compared to the previous peak of 324,254 tons in 1952. There was also a record tonnage of California Bartletts canned in 1954 amounting to about 246,630 tons. Oregon Bartletts were down about 40 per cent from 1953 and Washington was off about 15 per cent.

ESTIMATED TOTAL TONNAGE OF PEARS IN PACIFIC COAST STATES, 1954

State	Bartlett	Winter Varieties	Total
California	360,000	46,000	406,000
Oregon	35,000	60,000	95,000
Washington	100,000	35,000	135,000

Winter varieties are about one-third lighter this season in Oregon and 20 per cent off in Washington from the 1953 crop. Oregon and Washington suffered serious damage from a late April freeze. Greatest injury was in the Rogue River Valley, with extensive but lesser damage at Hood River, Wenatchee, and the lower Yakima Valley.

Prices Are Good

California shipped about 4,150 cars to eastern markets in 1954, nearly a 33 per cent increase over 1953, and in addition shipped about 1,200 cars to western markets—a substantial increase over previous shipments. Even with the large increase in shipments, the all-auction average of California Bartletts was about $5.25, which is a few cents higher than in 1953.

The price improvement over 1953 in Oregon and Washington Bartletts

PRODUCTION—ALL PEARS—Million Bushels

1943-52	30	1953	29
1952	31	1954	30

to mid-October was much greater than for California. Winter pears also started out at somewhat higher figures, as might be expected from the lighter crop.

Cannery prices, while not high, are considered as satisfactory in view of the size of the crop. This should allow the price of the canned pears to be such that they will move freely through retail channels.

The 1954 Bartlett crop was generally of good quality and of even maturity. Softening of the fruit on the tree during the harvest season was more rapid than usual, causing some concern and difficulty over soft fruit in later harvests. The greatest difficulty occurred in orchards with very heavy crops where fruits were slow to size.

Several factors were probably responsible for the success of the fresh Bartlett pear market. The Bartlett Pear Commodity Committee of the California Tree Fruit Agreement approved the use of new federal maturity regulations which assured fruit that, properly ripened, would give acceptable dessert quality.

Many of the pears harvested during the first seven to 10 days were shipped without precooling and with modified refrigeration in transit so that they were ready for home consumption within three to five days after arrival. In this way the market essentially was extended as much as five days. This avoided the depressing effect that occurs when the market is backed up by early high-priced pears which ripen slowly.

A third major factor in the successful movement of large tonnages to fresh markets was the extensive sales promotion program operating under a California State Marketing Order.

A fourth factor was the successful negotiation of a cannery price very early in the shipping season so that canners were accepting pears from the early harvests. This was accomplished largely by the efforts of the California Canning Pear Association, a relatively new growers' organization which represents the greater part of California's canning pear tonnage.

Oregon, Washington, and California have continued their joint efforts in the nationwide sales promotion of canned Bartlett pears. Growers of winter pears also work together as the Oregon-Washington-California Pear Bureau in sales promotion of these varieties. THE END

GRAPES

More grapes from fewer vines and mechanized handling highlighted the 1954 grape harvests

CONCORD CONTINUES POPULAR

By NELSON SHAULIS

New York Experiment Station

THE 1954 production of American grapes (exclusive of *Vitis vinifera* and muscadine grapes) was substantially the same as 1953. October estimates by the Crop Reporting Service of 1954 grape production are as follows:

GRAPE PRODUCTION IN SIX STATES AND ONTARIO
(in thousands of tons)

	1943-52 average	1952	1953	1954 (estimate)
New York	56	62	67	77
Michigan	31	40	50	41
Washington	21	33	46	33
Pennsylvania	17	18	17	22
Ohio	13	14	16	16
Arkansas	10	8	3	5
Ontario (Canada)			39	43

The low crop in Arkansas has been charged to cold injury and dry weather. Mid-winter freezes were responsible for the crop reduction in Washington.

The 1953 and indicated 1954 crops were each about 30 per cent greater than the 10-year averages. For New York the 1954 crop was the fifth consecutive crop at or above average. The general increase in production was due primarily to good vineyard management and to replacement of some old vineyards by new plantings. In New York there were less acres of vineyard in 1950 than in 1940. The good crops of 1950-54 represent substantial increase in yield per acre.

Prices received by growers for grapes were essentially similar to those received the previous year.

As growers replace or add to their vineyards, Concord is emphasized. The Concord market is a strong one. The price for wine grapes is higher but these higher prices are not applicable to substantial increases in the tonnage of wine grapes. Thus, in the last two years, some growers have had difficulty selling Delaware grapes at Concord prices.

The demand for whole-grape preserves suggests this may be the third "new" outlet for Concord grapes.

In the year ahead:

1) The industry could consider the purchase of grapes on the basis of sugar-content. This could be useful in maintaining quality. Over-production has delayed maturity and reduced quality in some vineyards.

2) An educational program is needed on the dangers of 2,4-D when used by railroads, utilities, cereal growers, or anyone else in a community where grapes are grown.

3) Every grape grower can be hurt by planting new vineyards on marginal sites. There is now some of that planting taking place. If the industry can handle more grapes, they should come from better practices in every vineyard, from replacement of aged vineyards, and from new vineyards on excellent sites.

MODERATE CROP IN CALIFORNIA

By A. J. WINKLER

University of California

THE 1954 California grape crop was only moderate in volume, due primarily to the succession of overcrops in 1951-53. This reduced the levels of food reserves in the vines, especially of Thompson Seedless, and restricted fruit bud formation. With less fruit most of the vines made almost normal growth. A minor hot spell in June and a more severe one in early July caused considerable sunburn and a slight further reduction in crop, but aside from these hot spells the season was very favorable.

This, with only a moderate crop and good vine growth, led to the production of the highest quality raisin and wine grapes since 1950.

The shipment of table grapes began the earliest ever. A car of Perlettes moved from the Coachella Valley on May 19. Shipments are running about 2.5 per cent ahead of 1953 with prices holding about the same. The Perlette, Italia (Italia Muscat), and Black Rose, relatively new varieties, gained markedly in popularity.

PRODUCTION—CALIFORNIA GRAPES—Million Tons

1943-52	2¼	1953	2½
1952	3	1954	2½

Several mechanizations have been perfected for handling wine grapes. In one of these the grapes are dumped directly from the vines into low gondola trucks. In another the grapes are dumped from the vines into small one-ton metal tanks which are then handled with fork lifts, while a third takes the grapes from the container into which they are picked and conveys them to gondola trucks for delivery to the wineries. The loads from gondola trucks and the small tanks are in all instances dumped into the crushers by mechanical means.

Assuming that the consumption of California grapes will average about the same (2,450,000 tons) as in 1951 and 1952, which were years of large crops, there will continue to be a surplus of grapes with an average crop in 1955. This situation should be taken into account in pruning. Limiting the number of buds retained in proportion to crop and amount of vine growth of 1954 will make for better fruit quality generally and will reduce costs where thinning is done. THE END

BERRIES and BRAMBLES

Small fruits are becoming big business in the western states

WESTERN PRODUCTION IS GOING UP

By R. RALPH CLARK
Oregon State College

WESTERN berry growers are showing an ever increasing interest in the growing of small fruit crops. The long distance from large consuming markets and high costs of transportation are probably the greatest limitations to our berry production today.

The indicated acreage of 108,800 acres of strawberries for the U.S. harvest in 1955 is only slightly lower than that of the past year but is 13 per cent below the average. While California and Oregon have significant increased acreages, some of the states have had curtailed plantings and even loss of old plantings due to drought. Louisiana, Arkansas, Oklahoma, and Missouri have suffered in this manner and will be missed in the fresh markets in 1955.

California is now producing about 141 million pounds of strawberries or approximately one-third of the total U.S. crop. Oregon has about one-third of the present U.S. acreage, or 18,000 acres. Washington will pick from around 11,000 acres in 1955 and has harvested 11 per cent of the national crop during the past year. The Pacific Northwest is primarily a producer of processing berries while California shipped about 43 per cent of its 1954 crop to the fresh market.

Raspberries with less than half the acreage of strawberries in the Pacific Northwest are also one of the good small fruit crops.

Black raspberry production is good in the Pacific Northwest under proper growing conditions and is one crop that apparently is not doing so well in many other places. The acreage in Oregon has surpassed that of red raspberries, and the demand for more planting continues.

The trailing berries are not as popular as raspberries. There has been little change in recent years in the acreage of Loganberries in the Pacific Northwest. Boysenberries and blackberries have shown some increase despite the variety of problems they present. California acreage is increasing and growers in that state are getting higher production than are growers in the Pacific Northwest.

Interest in blueberry growing is on the upswing in Oregon and Washington where good land and planting stock are available. The newer varieties are commencing to show their merits and propagators are rushing to try to supply this demand.

BLUEBERRY POPULAR IN NEW JERSEY

By ERNEST G. CHRIST
Rutgers University

THE three important berry crops in New Jersey are strawberries, blueberries, and cranberries. The acreage of strawberries is holding steady at around 3,000 and has been for the past 10 years. Cranberry acreage increased during the last 10

years to about 7,000. Blueberry acreage has been increasing steadily. Ten years ago the acreage devoted to blueberries was slightly over 1,000 and today it is in excess of 5,000 in bearing and several thousand non-bearing acres. Production in 1953 exceeded one million flats of 12 pints for the first time in the history of the industry, and the production would have been near the million and a quarter mark in 1954 if the crop had not been reduced by drought.

The drought reduced the crop of mid- and late-ripening varieties and on dry soils plants are injured sufficiently to reduce the crop for 1955. Total production is not expected to be reduced, however, since new acreages are coming into bearing.

Strawberry yields range from 3,500 to 6,000 quarts per acre most generally but occasionally yields of 8,000 and 10,000 quarts per acre are harvested. Two and possibly three main factors are reducing yields. The virus complex, red stele, and soil insects are most destructive.

The drought, frost in June, and fires in August resulted in a 25 per cent reduction in the 1954 cranberry crop. The crop is estimated at 75,000 barrels. Growers are increasing their work on the bogs in the way of improved cultural practices including weed control, sanding, pruning, spraying, and fertilization. This is resulting in better yields per acre and less rot in the fruit. Many growers feel the 1955 crop will not reach 100,000 barrels as a result of 1954 injury to several hundred acres. THE END

NUTS

Consumption is practically at a standstill—which means an aggressive program of consumer education is urgently needed

By H. L. CRANE
U. S. Department of Agriculture

THE crop year of 1954 was one of extremes in effects of weather conditions on production of edible tree nuts. In the Pacific Northwest the growing season was very cool and there was more rainfall than usual. The favorable moisture supply when the nuts were increasing in size resulted in a greater proportion of larger than normal nuts, but the cool weather that prevailed generally prevented the optimum development of the nut kernels and the desired high oil content. In the South, one of the most severe and prolonged droughts ever recorded, accompanied by very high temperatures, reduced the quantity of pecans and their size and in many areas the nuts were poorly filled and of low oil content.

The total expected 1954 crops of almonds, filberts, pecans, and walnuts are estimated at 183,936 short tons, in-shell basis. This total is 73 tons more than the 1943-52 average, but only 88 per cent of the unusually large crop of 1953. All tree nut crops except pecan are much larger in 1954 than in 1953, so much so that a fairly large percentage of each kind of nut has been set aside as surplus and not for sale as in-shell nuts but to be disposed of in other forms.

More Consumption Needed

Although since World War II there have been rather sharp declines in the prices that the growers of tree nuts have received for their crops, there has been no per capita increase in consumption. Data supplied by the U. S. Bureau of Agricultural Economics show that the average per capita consumption of all tree nuts, including those produced in the United States and those imported, averaged only 1.58 pounds of kernels annually for the 5-year period 1948 to 1952. The range was 1.66 pounds in 1948 to 1.46 pounds in 1952.

PRODUCTION (SHORT-TONS) OF TREE NUTS IN-SHELL*

Kind of Nut	1943-1952 Average	1953	1954 Expected
Almonds	36,370	38,600	48,300
Filberts	7,936	4,960	9,510
Pecans:			
Budded	30,238	51,452	20,920
Seedling	36,549	54,378	24,706
TOTAL	66,787	105,830	45,626
Walnuts	72,770	59,200	80,500
GRAND TOTAL	183,863	208,590	183,936

*Data supplied by USDA Bureau of Agricultural Economics.

These data suggest that Americans still consider nuts a luxury commodity to be consumed only on special occasions. Furthermore, it would appear that the nut-producing industries could benefit substantially from an instructive program designed to acquaint the consuming public with the high protein, mineral, and other food value of nut kernels, as well as their desirability for everyday food.

ALMONDS

The estimated 1954 crop of almonds is 25 per cent more than that of 1953 and approximately 33 per cent above the 10-year average. The quality of the crop has been reported as very good. Because heavy crops were borne by the trees there were more small nuts than usual. However, nuts yielding kernels of which 30 or more are required to weigh an ounce were not expected to meet the demands of candy-bar manufacturers. The demand for small, flat kernels has been strong enough to warrant the initiation of an extensive breeding program by the University of California, the USDA, and private breeders to create varieties that will produce the kind of nuts desired.

It is believed that almond production in California, which produces all the commercial crop, has not yet reached its highest level. The extensive plantings made in the 40's have not yet reached full production, and

those made recently have probably exceeded tree removals. Once the almond was considered a tough tree that would grow and produce nuts under poor conditions, but growers have found that almonds respond to fertile soil, adequate water, and proper fertilization. The improved orchard management practices now being used by more and more growers are certain to result in higher and more consistent yields of nuts per acre than obtained earlier.

FILBERTS

The 1954 commercial filbert crop of Oregon and Washington is expected to be almost double the low 1953 crop and about 20 per cent more than the 10-year average (1943-52). This large crop resulted in lower prices for nuts to the trade and hence lower

(*Continued on page* 40)

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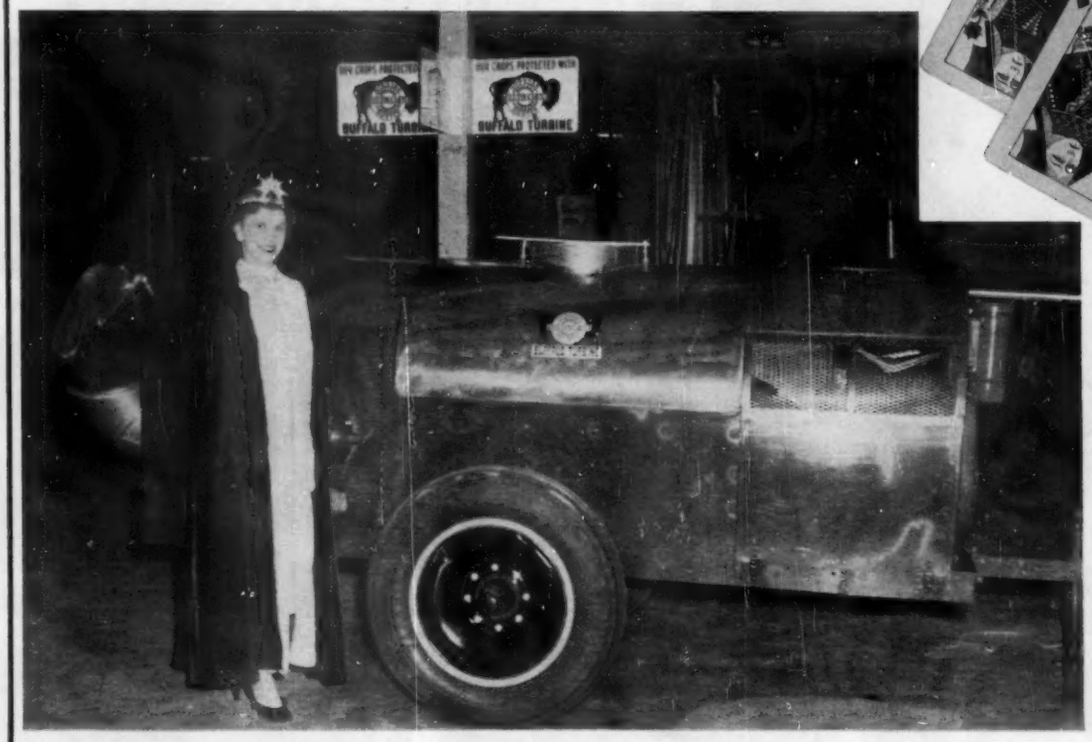

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National Cherry Festival Queen Gail Krahnke, of Michigan

Illinois State Fruit Queen Marie Esposito

Ohio Grape Festival Queen Irene Hales

1954's NEW FRUIT VARIETIES

Today's varieties are developed to meet specific requirements, so make your selections carefully

By REID M. BROOKS and H. P. OLMO
University of California

NOWADAYS fruit varieties must meet special needs that were not even thought of a few decades ago. There are varieties for gas storage, for freezing, for conserving, and for drying; for sale at the local roadside stand or to be shipped to market 2,000 miles away. Even the variety reaction to chemicals now used for growth regulation are of considerable significance.

Thus the changing market requirements as well as the technology of production are demanding varieties increasingly adapted to certain specific uses. The successful grower must not only be acquainted with new developments in growing and marketing, but he must ever be on the alert to test new varieties that might surpass the standards used by his competitors.

These new fruit and nut varieties are often called to grower attention by the *Register of New Fruit and Nut Varieties* which has now published nine lists over the past 11 years and covers descriptions of 1,415 new varieties that have originated and been commercially introduced during or since 1920, the point of departure for the *Register*. The *Register* is the only publication to give the names of all patented varieties, as the patent description gives no varietal name, only the number assigned to it by the Patent Office.

Annual lists of the *Register* are now published in the *Proceedings of the American Society for Horticultural Science*. A summary covering the period 1920-50 has been published in book form by the University of California Press, Berkeley 4, Calif., and includes 1,106 new varieties. Over 80 prominent horticulturists, representing all parts of the United States and southern Canada, aid in this co-operative project. The present descriptions of new varieties is abstracted from recent lists of the *Register*, most of the varieties having been introduced during 1954.

Beauty Seedless, a California introduction, is first black seedless grape to be produced by breeding.

APPLE

Barkley Red Rome is a bud sport of Rome Beauty, discovered in 1944 by G. L. Barkley, Manson, Wash., and was commercially introduced in 1953. Patent is pending. Skin has much more red color than either Rome Beauty or Red Rome, with distinctive striping. Fruit tends to be longer than most Rome Beauty fruits; has very good keeping qualities.

Nero Rome originated in Tieton, Wash., by Robert S. Lemcke and was introduced commercially in 1954. Fruit is a longer type than Rome Beauty, colors early, and has a bright red skin with heavy red striping effect. Most nearly resembles Rome Beauty. A patent has been applied for this variety. Synonyms of this variety are Flaming Rome, Lemcke Rome, and Tieton Rome.

Puritan resulted from the cross McIntosh x Red Astrachan and was made and developed by F. C. Sears, Department of Pomology, University of Massachusetts, Amherst. Fruit has an attractive red color with white flesh which is a bit tart but of good quality. Ripens in season of Early McIntosh, with medium sized fruit. Tree produces wide-angled crotches and has a tendency to bear biennially. Pollinates McIntosh which it most nearly resembles. Commercially introduced in January, 1953.

Red King Delicious was introduced commercially in December, 1953, by Van Well Nursery Company, Wenatchee, Wash. Discovered as a bud sport of Starking by Barkley Brauns, Riverside, Wash. Skin colors early in the season and most nearly resembles Starking.

AVOCADO

Ponteprino, introduced in 1952, is included here because it is a patented variety (patent 1,080) and was just named. Its parentage is unknown, being discovered in 1937. Flesh is a rich yellow, with high oil content, surrounding a small seed. Skin is dark green and peels readily. Harvest season ranges from May to October. Discovered in Anaheim, Calif., by Meyer E. Ponteprino.

Routh is patent number 1,208, and was commercially introduced last year. It belongs to the Guatemalan race, but its parentage is unknown. Fruit matures over a long period of time, making for market flexibility. Skin is a bright green with a medium smooth surface. Its shape in coastal areas of California is pyriform but is slightly necked inland. Ranges in weight from 5½ to 8½ ounces. Herbert L. Gillespie found it in San Gabriel, Calif.

BLACKBERRY

Jerseyblack originated at the Horticultural Farm, New Jersey Agricultural Experiment Station, New Brunswick, by J. Harold Clarke and was introduced

commercially in the spring of 1953. It resulted from the cross Evergreen x Eldorado, but the fruit most nearly resembles Eldorado. Very few nubbin fruits are produced on the vigorous bush. Season begins July 15 with peak July 25 in New Jersey. Apparently it is rust resistant.

BLUEBERRY

Croatan originated at Raleigh, N. C., by North Carolina Agricultural Experiment Station and USDA, being introduced commercially January 1, 1954. The late F. V. Coville made the cross Weymouth x F-6 which gave rise to this hybrid. This is the same parentage which gave Angola, Wolcott, and Murphy. Fruit ripens later than Angola and Wolcott but ahead of Murphy. During a seven-year period, 1946-1952, it ripened 68 per cent of its fruit during the first two weeks of harvest as compared with 92 per cent for Angola, 79 per cent for Wolcott, 66 per cent for Weymouth, and 57 per cent for Murphy. Fruits are borne in long, fairly loose, attractive clusters. Individual fruits are slightly larger than above-mentioned varieties; Croatan averaged 89 berries per standard half-pint measuring cup. They are aromatic and sweet to subacid depending upon degree of ripeness. Plant is resistant but not immune to canker, but is more resistant to bud mite than Wolcott, Murphy, and Weymouth. Recommended for trial as a vigorous, productive, second-early, canker-resistant variety for eastern North Carolina, but not northward.

CHERRY

Sam originated in Summerland, British Columbia, Canada, by A. J. Mann of the Department of Agriculture Experimental Station, and was introduced commercially in 1953. It is an open pollinated seedling of Windsor. Fruit is sweet, large, firm, black, of good quality, and ripens at least a week earlier than Bing. Fairly resistant to cracking. Resembles Deacon in shape and Bing in quality. Tree is vigorous, at least as hardy as Bing, and is self-unfruitful but interfruitful with Bing, Lambert, and Van.

Sanguinetti originated in Stockton, Calif., by Dave V. Sanguinetti. It has not been introduced commercially but is included here because it has been used, particularly by the late Prof. Guy L. Philp, in the sweet cherry breeding program conducted by the Department of

(*Continued on page* 43)

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American Fruit Grower
WESTERN SECTION

New officers of Washington State Horticultural Association following its Golden anniversary meeting in Yakima December 8-10 are, left to right: Walter Martin, Wapato, first vice-president; Nels Taylor, Wenatchee, president; and Dr. John C. Snyder, Washington State College, Pullman, second vice-president. Elected to the board are Fred Redman, Jr., Wapato, and Stanley Dwinnell, Oroville.

Golden Anniversary in WASHINGTON STATE

Horticultural association celebrates 50 years of service to the state's important fruit industry

By WILLIAM H. WRIGHT

IT was inevitable that a successful horticultural organization would materialize in Washington state, even if the first one formed in 1892 did collapse. By 1904 orchard problems were so thorny that something had to be done about them, and a new organization came into existence to help resolve them. If Washington's infant fruit industry was going to survive, it was up to the growers to co-operate and to share their experiences in working out solutions.

Many of the early difficulties, such as codling moth, are now fairly well under control, but with growth and expansion of the fruit industry a host of new problems always replaces the old. At its 50th and golden anniversary meeting in Yakima this past December the association found itself even busier than the day it was founded.

Cultural practices, market problems, and grower education have received thorough attention from this live organization every year at its jam-packed, three-day annual meetings. Subjects don't change, but methods do, and as the years have rolled around, it has become quite apparent that horticulture is no haphazard occupation, but a complicated science. The annual gatherings, now held alternately in Yakima and Wenatchee, attract hundreds of growers.

The association is busy the year round, with much of its work accomplished by various committees. It is the practice of the association to develop committees as the need arises, then abolish them when their usefulness has terminated.

As an example of committee work, one was formed to tackle the spray residue problem when arsenate of lead was the principal insecticide for codling moth control. It became necessary to wash apples, and without conclusive research, federal authorities set a "tolerance" lower than necessary to protect human health. This low tolerance required adding acid and heating the washing solution. Fruit quality was injured and growers were paying increased packing charges.

A spray residue committee set up by the association brought about a more liberal tolerance that changed the severity of the washing. Savings to growers from this accomplishment amounted to several million dollars.

The latest important committee to be formed is a fact-finding committee on advertising to look into and make recommendations about the contemplated consolidation of the Washington State Apple and Washington State Fruit commissions. Eleven men, including the last six ex-presidents of the association, have been appointed by Elon J. Gilbert, retiring president, to report on the subject.

Some other committees that either do function or have been in existence include apple maturity, grade and pack, virus, little cherry control, pear grades, legislative, apple processing, fairs and exhibits, special Jonathan maturity, rain making, fruit pollination, membership, research and scholarship, new fruits, irrigation branch exploratory, advertising and promotion, hunting season, transportation and markets, field exposure of insecticide, apple juice concentrate, and toxicity of insecticides.

If the first half century of its existence indicates anything, the Washington State Horticultural Association always will have work cut out for it, and as long as capable leadership continues, the organization will be invaluable to Washington's important fruit industry. THE END

A report on the panel discussions which took place during the Washington meeting will be found on page 39 of this issue.—Ed.

FILM LINERS

FOR PEARS AND APPLES

Market season is extended by packing the fruit in film

Storage life of pears is lengthened when fruit is packed in sealed films; shelf life is increased; condition and appearance of fruit upon removal from storage is better than that of standard pack. Film liners above are ready for sealing.

Air is removed from inside film liner by vacuum.

Fifty carloads of western Bartletts went to market this way, in sealed liners, in 1954.

In the USDA experiments conducted by H. A. Schomer and Fisk Gerhardt at Wenatchee, Wash., Golden Delicious apples stored for six months in sealed liners also were better than fruit from standard packs. Photo shows Golden Delicious in cell carton lined with polyethylene bags.

NEW... for Fast, Clean Tillage

A dream for disking! The new Case Offset Disk has five working positions . . . adjusts easily to offset right or left for working close to trees . . . gangs can be set to ridge, ditch or level seed beds. Trails true on turns . . . lifts clear for turning or transport at a touch of hydraulic control. 4½, 5¼, and 6 ft. sizes. Mounts on tractors with Eagle Hitch or other 3-point hook-up. Also wheel-type trailing offset disk harrows.

Built Low and Narrow. Case "VAO-15" Tractor has adjustable tread —44 to 60 inches in front; 45 to 64 behind. Low platform . . . low Bodyguard® seat . . . Eagle Hitch 3-point hook-up, also swinging drawbar. Constant Hydraulic Control.

Tears Out Weeds and Grass with powerful penetration. Case Lift-Type Springtooth Harrow lifts hydraulically—to shake out trash, for U-turns, backing, transport. Mounts in a minute on Eagle Hitch or other 3-point hook-up.

SEE YOUR CASE DEALER

about these and other new Case machines for citrus groves, orchards and vineyards. Ask for a demonstration —or write for free pictorial folders on any Case machines that interest you. J. I. Case Co., Dept. A-135, Racine, Wis.

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Specially formulated for fruits, berries and melons in your area

When fancy quality and big yields on an early market mean the high dollar, be *sure* the plant food you use is Vigoro Commercial Grower—the cream of Swift's full line of farm plant foods!

This complete plant food is specially formulated to supply maximum nutrient requirements of high-value crops. It helps provide the balanced feeding that brings you size, quality, and even flavor in the harvested crop that demands top-of-the-market prices.

Ask any grower who has used it. He'll tell you that Vigoro Commercial Grower stands alone in its ability to make every foot of soil yield the very best!

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For full information, clip the coupon below and mail it today.

Vigoro Commercial Grower is Chemically-Hitched—ingredients are fused together by an exclusive process developed in Swift's research laboratory. This assures uniform feeding of your crop, helping to raise the yield-standard of your farm.

*Vigoro is the trademark for Swift & Company's complete, balanced plant food.

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WINDFALLS

What Makes Us Tick? WHAT keeps orchardists going in the face of hurricanes, frosts, diseases and pests, mechanical breakdowns, high labor costs, and low selling prices? Is it only habit that holds us to the job?

No doubt habit helps. Having taken sufficient time to learn the complex details of a business, we do not give it up hastily for another occupation which is also likely to have its hazards. But there are a few brave souls who see further than this. John W. Hershey of Downington, Pa., nut tree nurseryman, explorer of chestnuts, chinquapins, acorns, honey locusts and many other food trees, and independent thinker, is one of these. He doesn't hesitate to smite hypocrisy or sloth wherever he finds them in college, church, or state. Therefore, it was pleasant to have the operator of "America's No. 1 Tree Crop Farm" approve our last month's discussion:

"My compliments to the good editor for injecting into the fruit growing business the spirit of the universe, namely, a little philosophy of living. It's the spirit that wins the battle. As materialism strides on, that spirit is lost in the deluge of 'things' until such time as a new virile people take over. For a man to be successful on the soil, for a people to be successful as a nation, man has to first have the philosophy of living and then all things else will be added unto him.

"Whenever you get a letter from an industrialist manager bellyaching about 'his yearning for the simpler life,' stop and contemplate the tremendous energy and 'Spirit of God' it takes in man to forego the fleshpots of materialism with all their glamour and stay simple. My heart bleeds for him. But it bleeds more yet for the land that's being ruined by 'agriculturists' while the *best* timber that would make good soil husbandmen fritters its life away in industrial management."

Salvation in Trees Mr. Hershey sees clearly that man's future on this planet is closely linked with trees. He looks at the high percentage of water runoff, the increasing tragedy of soil erosion, and declares:

"The answer lies in erroneous

farming and loss of our thermal controls—our forests. It is written in the Good Book that the tree of the field is man's life. If you don't think that is important, just do without trees. Go where they have had civilizations that used their trees faster than they replanted them and you see a desert.

"A forest belt controls the temperature as much as 13°. That doesn't sound like a big range. But if you have 36° temperature instead of 13° less than that, you have a fruit crop instead of failure. If you have 13° hotter temperature than growing heat in summer, you have terrific evaporation and all growth stops. Or you can have sunburn, scorching of fruit. In California they have the scorching of English walnuts on one side, making an inferior grade.

"It is a factual record that one inch of forest floor will hold one inch of rainfall, and six inches of forest floor will hold six inches of rainfall. The top inch of forest floor will hold 47 times the amount of water the top inch of a worn-out field will hold; the fifth inch down 15 times as much, while even the eighth inch will hold two and one-half times more than the eighth inch of an abandoned field. So you can see the importance of proper farming by planting trees, retaining thermal and water controls. You can see how important it is that each person play his part in retaining the continent on which we live."

We are pleased to award him the ten-dollar Windfall prize of this month.

Want To Win a Windfall? INQUIRIES come as to just what sort of contribution is most wanted in this column. Here are a few concrete suggestions:

1) Tell us in simple language, what, aside from dollars, you have found significant in orcharding. This may be in terms of underlying philosophy, appreciation of nature, satisfaction in raising food for human consumption, contribution to home or community, or religious significance.

2) Relay any humorous incident out of your orchard experience. We're looking for all the fun there may be in our industry.

3) Send a copy of your favorite orchard poem, or any original verse you have been moved to write.

4) Give us your interesting observations of nature: bird life in the orchard, bees, blossoms, etc.

5) Tell us any example of character building, influence of the environment upon children you have noticed; any instance that would seem to relate the orchard to church or school.

Happy Fruit Year!

Address your Windfalls letters and contributions to AMERICAN FRUIT GROWER, Willoughby, Ohio.

THE BIGGEST working dollar around your orchard

All these — with this one tractor.

- ★ Automatic Traction Booster
- ★ Two-Clutch Power Control
- ★ Power-Shift Wheel Spacing
- ★ SNAP-COUPLER for Quick-Hitch implements
- ★ Complete Hydraulic System
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- ★ Full crop and implement clearance
- ★ Free-Swing for implements, led from a single hitchpoint

A dollar can do a lot more work if it's invested in Allis-Chalmers tractor engineering.

In the Model CA, your dollars buy the outstanding tractor in its class . . . a tractor that can handle a 6-foot offset or a 7-foot tandem disc harrow, two-bottom plow — and many other orchard tools.

Here is a new concept in orchard power . . . less bulk, more brawn . . . *at lower cost* . . . plus features that enable you to handle more *kinds* of work easier and faster.

You don't have to "baby" the CA. Give it your *tough* jobs — see how it handles heavy loads with a powerful, sure-footed pull. You'll find the CA the huskiest, handiest, liveliest two-plow tractor you ever operated.

$1,564 f.o.b. factory

Model CA Tractor complete with above features plus power take-off, adjustable front axle, standard front and rear tires, foot brakes, belt pulley, fenders, starter and lights. Implements are extra.

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FITCHBURG CHIPPER
converts orchard prunings into valuable
LOW COST MULCH

Leading fruit growers have found it really pays in better fruit and better finish to chip their prunings and thinnings, and leave the chips around the base of the trees as a moisture holding mulch.

One well-known grower says:

"Our Fitchburg Chipper is one of the best investments I have ever made, and has already paid for itself. I believe the chip mulch to be far better than hay as it will not burn and will last a lot longer."

For as little as $650

you can get a suitable Fitchburg Chipper for orchard work with the patented Fitchburg Safety Spring so essential to smooth operation.

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☐ Soil enrichment ☐ Farm roads, field lanes
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Make Hort Time MOVIE TIME

View—and review—your favorite industry indoors this winter

WANT to show movies at your next hort meeting? In answer to many requests, the United Fresh Fruit & Vegetable Association has compiled a list of films available on various phases of the fruit industry. Most of these films will be loaned to responsible groups on payment of postage or express charges. Some may be purchased outright. Unless otherwise stated, all movie films are 16 mm, and all filmstrips are 35 mm.

Motion Picture Films

Apple Handling Methods; color-sound; 20 minutes; proper handling methods from orchard to consumer. Washington State Apple Commission, 15 Palouse St., Wenatchee, Wash.

Apples; color-sound-music; 30 minutes; story of Applachian apples. Appalachian Apple Service, Inc., Martinsburg, W. Va.

Gateway to Health; color-sound; 24 minutes; menus for strong bodies and sound teeth, stressing need for balanced diet and showing value of crisp foods. Dr. Fred D. Miller, of Altoona, Penna., is the narrator. National Apple Institute, 726 Jackson Pl., Washington, D.C.

Impulse Payoff; color-sound; 30 minutes; dramatized merchandising film on how to increase store traffic, sales through use of polyethylene. E. I. Dupont de Nemours & Co., Inc., Film Dept., Wilmington 98, Del.

Keeping Them Fresh; color-sound; 24 minutes; how protective process in fresh fruits increases sales appeal and reduces decay; slanted to retail trade. Food Machinery & Chemical Corp., Riverside, Calif.

Naturally Yours; color-sound; 19 minutes; use of ice and refrigeration in transportation and distribution of produce. National Assn. of Ice Industries, 1706 L Street N.W., Washington, D.C.

Orange Grower, The; (16mm and 35mm); black and white-sound; 10 minutes; planting and cultivating of orange groves, including budding, transplanting, fertilization, irrigation, protection against insects and cold, picking, packing, and shipping. Encyclopedia Britannica Films, Inc., 1150 Wilmette Ave., Wilmette, Ill.

Profitable Partners; color-sound; 18 minutes; a merchandising film showing value of co-operation between grower, shipper, and retailer and showing various phases of the operation of the Florida Citrus Commission. Florida Citrus Commission, Lakeland, Fla.

Seedling to Market; color-sound; 10 minutes; story of the Delicious apple in the Northwest. Encyclopedia Britannica Films, 1150 Wilmette Ave., Wilmette, Ill.

"The freedom from operating trouble was outstanding as compared with conventional engine chain saws"

Albert J. Livezey, President
Ohio State Horticultural Society

VON RUDEN
Hydra-Flex
12 H.P. HYDRAULIC CHAIN SAW

- FASTER
- FATIGUE FREE

1 MAN AND 2 MAN MODELS

OPERATES FROM TRACTOR POWER TAKE-OFF

HERE IS MR. LIVEZEY'S COMPLETE APPRAISAL OF HYDRA-FLEX . . .

"Another 'find' in orcharding equipment which we like very much is the Hydra-Flex Chain Saw. This is a chain saw running hydraulically from the power take-off of the tractor. Its pump slips on the spline and is anchored to the drawbar. We've found this saw much more rapid than the regular small engine-type chain saw and the operators find that it is much less fatiguing to operate. The freedom from operating trouble was outstanding as compared with conventional engine chain saws. These three advantages are of very real value and make this saw 'head and shoulders' above any other chain saw. We used it for fruit tree removal but it works equally well in any sawing job such as felling timber and cutting it up or bucking fire wood."
(Quoted from the proceedings of the 1954 Annual Meeting of the Ohio State Horticultural Society.)

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With the Hydra-Flex it is possible to utilize power you already have to drive a big-capacity Post Hole Digger. Four bolts secure the heavy-duty digger to the Power Head. Post Hole Digger has positive chain drive . . . replaceable hardened cutting tips. The 12 smooth H.P. of the Hydra-Flex Post Hole Digger digs a 9" hole three feet in half a minute!
The Power Head of the Hydra-Flex Chain Saw may also be utilized as a Universal Power Drive. The unit is bolted in a simple, inexpensive mounting bracket. The Hydra-Flex Universal Power Drive is handy for powering augers, elevators, compressors, sprayers, etc. . . . an invaluable addition to your cost-cutting, profit-boosting mechanization.

POWER HEAD AND POST HOLE DIGGER AVAILABLE ALSO AS SEPARATE UNITS

FREE FOLDER gives complete information!
HYDRA-FLEX, INC.
44 Front St., Claremont, Minn.

Selection of Fruits and Vegetables; 2 reels, color-sound; 15 minutes; shows consumer shopping habits and retail merchandising practices; not available from film libraries for general use. May be purchased from United World Films, 1445 Park Ave., New York 29, N.Y. for $74.37.

Union Pacific Railroad film; (untitled; release date to be announced); color-sound; 45 minutes; film features fresh fruits and vegetables grown in 11 Western states served by Union Pacific. Union Pacific, Dept. of Public Relations, 1416 Dodge St., Omaha 2, Nebr.

Washington State—Appleland; color-sound; 21 minutes; story of the Northwest apple industry; produced by Washington State Apple Commission, distributed through Modern Talking Picture Service, Inc., 45 Rockefeller Plaza, New York 20, N.Y.

Film Strips

An Apple Is Like a Bag of Eggs; 32 frames; careful handling from picking to marketing; produced by USDA, distributed through Photo Lab, Inc., 3825 Georgia Ave. N.W., Washington 11, D.C.

Diseases of Fruits; (No. C-5 USDA); 53 frames, double; some of the common diseases of fruits, showing injury to fruit and plants. Photo Lab, Inc., 3825 Georgia Ave. N.W., Washington 11, D.C. ($6.50).

Easy Ways to Make a Banged-up Apple Crop; 33 frames; proper handling of apples; produced by USDA, distributed through Photo Lab, Inc., 3825 Georgia Ave. N.W., Washington 11, D.C.

THE END

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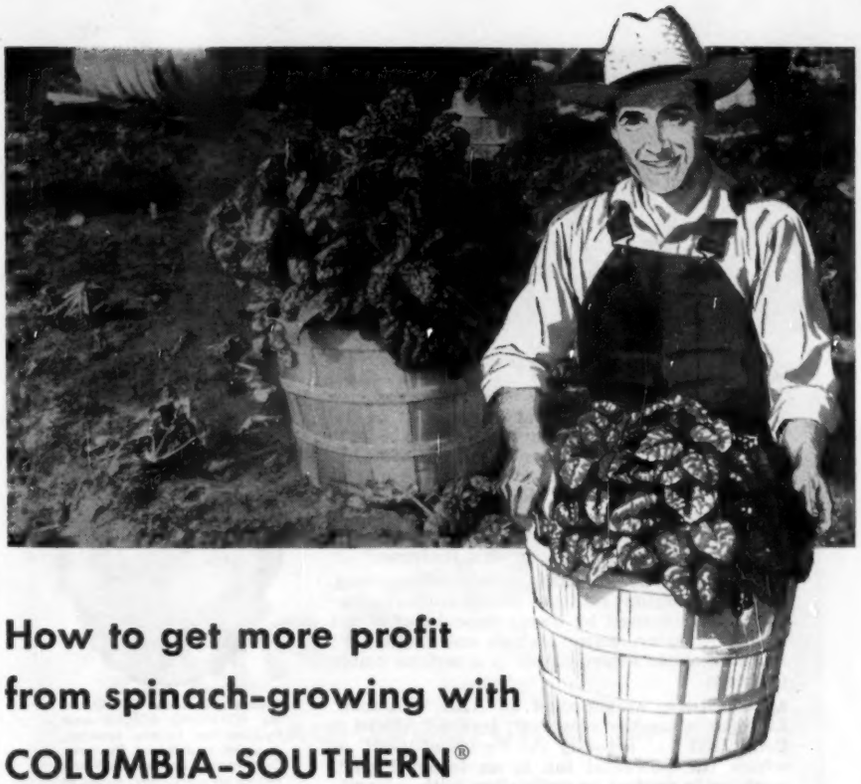

How to get more profit from spinach-growing with COLUMBIA-SOUTHERN® CHLORO-IPC

One of the greatest robbers of a spinach grower's profits is weed-choked stands. More and more growers are finding Chloro-IPC the answer to weed control not only in spinach but in other leafy crops as well.

Chloro-IPC's effective, efficient weed control means maximum spinach crop yield, improved quality, huge savings in the cost of hand-weeding, and relief from labor shortages.

Chloro-IPC is easy to apply yet it contributes tremendously to putting today's spinach growing on a modern, profitable basis.

Chloro-IPC is applied at the time of planting or transplanting, but in any case to the bare soil before weed seeds germinate. Dosages vary with soil type, temperature, and time of the year.

For further information on the trial use of Columbia-Southern Chloro-IPC in your plantings of spinach or other leafy crops, contact your pesticide dealer.

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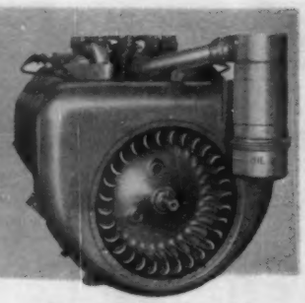


AIR-COOLING, as supplied on ALL Wisconsin Heavy-Duty Engines, automatically takes care of all cooling problems, at all seasons of the year, at all operating temperatures up to 140° F., or extreme sub-zero temperatures. Nothing to freeze in cold weather, no hot-weather dry-ups. There is nothing for the operator to *forget* or *neglect* — no costly replacements because "someone forgot" to put water or anti-freeze in the radiator. It's foolproof!

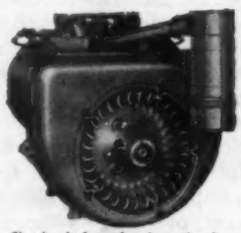
AIR-COOLING, as compared with water-cooling, prevents engine failures and expensive replacements caused by heavy deposits of alkali in the radiator, water jackets and heads . . . in those areas where alkali is a serious water problem.

AIR-COOLING, as supplied on ALL Wisconsin Engines, is handled efficiently by ONE SIMPLE CASTING . . . actually the flywheel itself, of which the powerful fan is an integral part, working in perfect co-ordination with scientifically designed cooling fins cast into the cylinder block and head, and carefully engineered air baffles in the shrouding.

WISCONSIN ENGINE AIR-COOLING provides trouble-free cooling *even under extremely dirty field conditions,* when engine is equipped with our specially designed, self-cleaning ROTATING SCREEN which is available as optional original equipment.

Open view of the powerful flywheel-fan on multi-cylinder models. Note depth and "scoop" design of fan blades . . . integrally cast as part of the flywheel. No delicate parts to invite damage.

Specially Designed Self-Cleaning ROTATING SCREEN over flywheel-fan intake opening, mounted directly on flywheel. Centrifugal force automatically throws off straw, hay, weeds or other trash that may come in contact with screen during field operation of equipment. Prevents clogging of fan, cooling fins and shrouding baffles. Rotating screen supplied as optional equipment when specified on factory orders.



Flywheel-fan showing simple, foolproof method of mounting Rotating Screen by means of stud bolts anchored in flywheel. Crankshaft collar provides snug closure at center without interfering with manual cranking.

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Write to:

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A complete line of orchard tools, equipment and chemicals.

FLORA DALE, PA.

Officers chosen during the two-day convention of Oregon State Horticultural Society included, from left to right (seated): David Lowry, Medford, outgoing president, elected to board of trustees; Harold J. Bushue, Boring, newly elected president; Gordon Walker, Independence, first vice-president; (standing) C. O. Rawlings, Corvallis, secretary-treasurer; Orville C. Hamilton, third vice-president; Dr. Harry J. O'Reilly, Corvallis, co-ordinator of activities; Glen Schaeffer, Boring, trustee. Ross Kukari, Hood River (not shown), was elected second vice-president.

BIG MEETING

Experts give Oregon growers cover crop and mulching facts

GETTING fruit with strong consumer appeal to retail outlets is the No. 1 problem of growers, Dr. M. J. Dorsey, secretary-treasurer of the National Peach Council, told the opening session of the 69th annual gathering of Oregon State Horticultural Society at Corvallis in December. More than 800 people were in attendance each day of the two-day program.

Since more than half of the retail purchases are made on impulse, "We've got to head marketing techniques toward this impulse," Dr. Dorsey advised. He also suggested vending machines and packages for vacation-bound travelers as methods for disposing of more fruit.

Improper fertilization programs came in for considerable "going over" during the entire meeting. Dr. L. P. Batjer of the USDA at Wenatchee, Wash., expressed the belief that fertilizer costs for many growers are needlessly high.

In the irrigated fruit sections of central Washington some of the growers apply mixed fertilizers containing phosphorus and potassium even though extensive experiments over a period of years have definitely established that trees in the area do not respond to applications of these elements, he stated.

Continuing the subject of fertilizers, Dr. C. P. Harley of the USDA at Beltsville, Md., said that establishing a cover crop and in some instances maintaining one interjects competition with trees for soil nutrients and water. Agreeing with Dr. Batjer, Dr. Harley said that in the trees nitrogen is probably the only element that is likely to become deficient as a result of this competition.

Nitrogen hunger may be evident in trees the first or second year after the cover crop is established, after which the nitrogen requirements can usually be met by the cover crop itself, the crop specialist continued.

But even above cover crops, Dr. Harley favored organic mulches as "having a relatively high nitrogen content," which "will do everything a cover crop will do and do it better by many fold."

The use of weed sprays in soil management in citrus orchards was discussed by Dr. E. O. Proebsting, pomologist, University of California. He referred to it as a "method of elimination of cultivation" and estimated that in excess of 100,000 acres of citrus are now non-cultivated.—*Harold and Lillie Larsen.*

PANEL-WISE

Washington growers profit from lively discussions at annual meet

TWO cultural panel discussions marked the 50th anniversary meeting of the Washington State Horticultural Association in December, one on establishing young trees and the other on orchard cover crops. Dr. John C. Snyder, extension horticulturist at the Washington State College, conducted the first, and W. A. Luce, Yakima County extension agent in horticulture, was moderator for the second.

Establishing the Orchard

The young tree discussion started from the nursery, with Robert E. Snyder of Wenatchee speaking for the Washington State Nurserymen's Association. Mr. Snyder pointed out that Washington nurserymen have a program of inspection for budwood, and stock is from registered trees.

Dr. T. A. Merrill of the agricultural experiment station at Pullman, Wash., pointed out that old soil in which arsenic is found must be avoided for new plantings. The best means to overcome the toxic soil problem is to dig out the arsenic-ruined soil around where the tree is to be planted and replace this earth with a clean type. A cubic yard of new earth will suffice for 30 to 40 trees, Bob Snyder added.

Dick Ormiston, a Prosser, Wash., grower, held that there is a definite place for intercropping as a means of providing income during those years the young orchard is growing up to a productive age.

Resumes of other horticultural society meetings will appear in future issues of AMERICAN FRUIT GROWER.

He suggested potatoes or beans. Tom Kirkpatrick, Oroville grower, definitely advised against using alfalfa for intercropping because irrigation problems arise.

Lester Green, Azwell, Wash., discussed training trees. They cannot be left to grow "like Topsy," but require close attention from the pruner. Charles Rowe, Naches, Wash., soft fruit grower, delved into some of the hazards of setting out young peach trees and said that large size trees show the best growth.

What Kind of Cover Crop?

The second panel discussion, on cover crops, referred to orchards of all ages. Should a cover crop be used, and if so, which is best, grass or legume?

Grady Auvil, Orondo, Wash., grower who was acclaimed the "fruit man of the year" in the Wenatchee district, favored cover cropping to supply humus, needed physical properties, and bacteria to the soil. Mr. Auvil preferred chewings fescue.

From the Soil Conservation Service at Sunnyside, Wash., was Frank Bough, who favored Kentucky bluegrass. Phil Jenkins, Parker, Wash., also preferred grass because it helps maturity and color of fruit.

Mulches received attention when Mr. Luce opened the topic, What should a good mulch consist of?

Dr. C. P. (Chick) Harley, USDA research worker from Beltsville, Md., said a high nitrogen mulch contains more than two per cent nitrogen. Legume hay is excellent, and trees on their way out may be saved by mulching.

Mice received their share of attention as Homer R. Wolfe, assistant horticultural extension agent from the Tree Fruit Experiment Station, Wenatchee stated that he favored no more than 10 pounds of a toxaphene spray to the acre as a control. —*W. H. Wright.*

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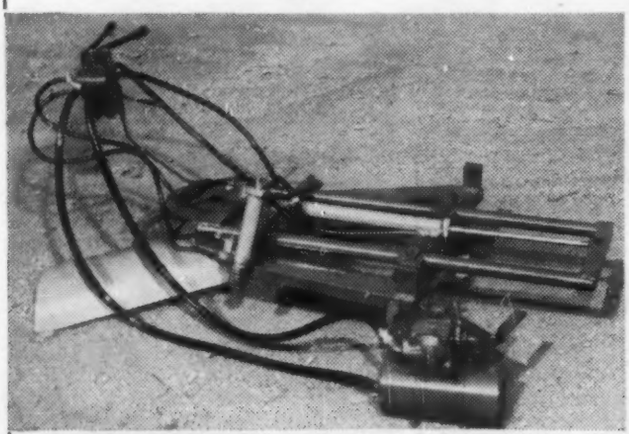

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NUTS

(*Continued from page 26*)

returns to the growers. The crop of 1954, like that of 1953, contained a high percentage of blank, or unfilled, nuts. Extensive counts made in August, 1954, in numerous orchards showed that on the average about 25 per cent of the nuts on the trees were blank. Most of these blank nuts dropped early and were disced into the soil in preparation for harvest and hence did not show up in the nuts delivered to the processing plants. However, the high percentage meant that the crops were reduced by that amount.

Nuts delivered to the processing plants had a high percentage of split shells which prevented their being sold in-shell. This condition was apparently due to the peculiar climatic conditions prevailing during the growing season and to improper methods of drying the nuts after harvest. Some driers start drying the wet nuts at a fairly high temperature, 115-120° F., and finish drying at about 90°. The hot air striking the nuts dries one side of them faster than the other, so that stresses develop in the shells and cause them to split. Drying should start at low air temperatures, which should be raised as the drying progresses.

PECANS

In 1953 it was predicted that as a result of the very large crop of pecans that year, which in many areas were not well filled, the crop would be small in 1954. Obviously it was not known then that 1954 would be extremely dry and that unusually high temperatures would prevail throughout the entire producing area. These conditions resulted in an expected total crop of only 45,626 short tons, or 43 per cent of the 1953 crop and 68 per cent of the average for 1943-52. The reduction in crop prospects is greater for budded nuts than for seedlings because of the severe drought and high temperatures in Georgia, the state that produces about 50 per cent of all nuts from budded trees. Even though the crop was small and the orchards generally well cared for, the size of the nuts was well below normal and kernel development was poorer than usual. Notwithstanding, prices to growers for good nuts were expected to be high. Strong demand for bright and light kernels was expected and because of the inadequate production some shellers anticipated difficulty in supplying the demand.

Growers who were in position to irrigate their orchards during the past two seasons found that practice highly profitable. These dry seasons

and the satisfactory response of the trees to irrigation stimulated many growers to plan irrigation of their orchards in the future. This program received additional impetus because pecan growers are rapidly turning to a system of orchard soil management that produces large amounts of forage for livestock grazing and at the same time provides conditions suitable for satisfactory production of high-quality nuts.

Experiments by USDA and Georgia Agricultural Experiment Station have shown that this management practice when properly carried out results in satisfactory yields of high-quality nuts and substantial income from the beef produced.

This system consists essentially of growing a winter legume such as the reseeding variety Dixie of crimson clover or California bur clover. The legume is heavily fertilized with phosphorus and potassium fertilizers.

PERSIAN WALNUTS

The 1954 walnut crop in California and Oregon, one of the largest in history, is expected to exceed that of 1953 by 36 per cent and the average for the 10-year period 1943-52 by 11 per cent. This crop, plus the carryover from last year, was such as to warrant the Walnut Control Board recommending to the Secretary of Agriculture that 10 per cent of the merchantable crop be set aside as surplus to be diverted for oil or export. This recommendation was accepted by Secretary Benson.

Harvest began in early September in the interior valleys of California but was delayed in the coastal areas and in Oregon until early October. Delay in maturity was thought to be due to the unusually cool weather and deficient sunshine during the summer and fall, especially in Oregon. Size and quality of the nuts produced in California were generally about normal considering the heavy crop, but in Oregon they were below the expected.

Antibiotics to the Rescue

A new development that holds promise for the future is the indication from experiments carried on in Oregon that antibiotics may provide the control of walnut blight (bacteriosis) that has been hoped for. In these experiments, three spray applications of a mixture of streptomycin and terramycin resulted in as satisfactory control of walnut blight as was obtained from three spray applications of yellow cuprocide, the material now recommended. In addition, the antibiotics caused no injury to foliage or nuts, whereas the yellow cuprocide caused a limited amount of injury to leaves. THE END

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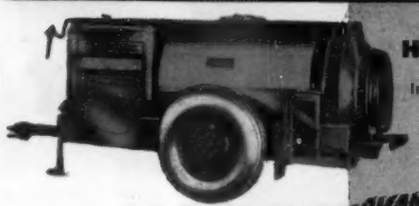

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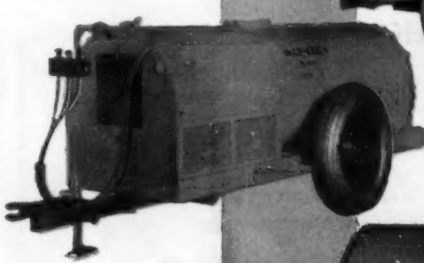

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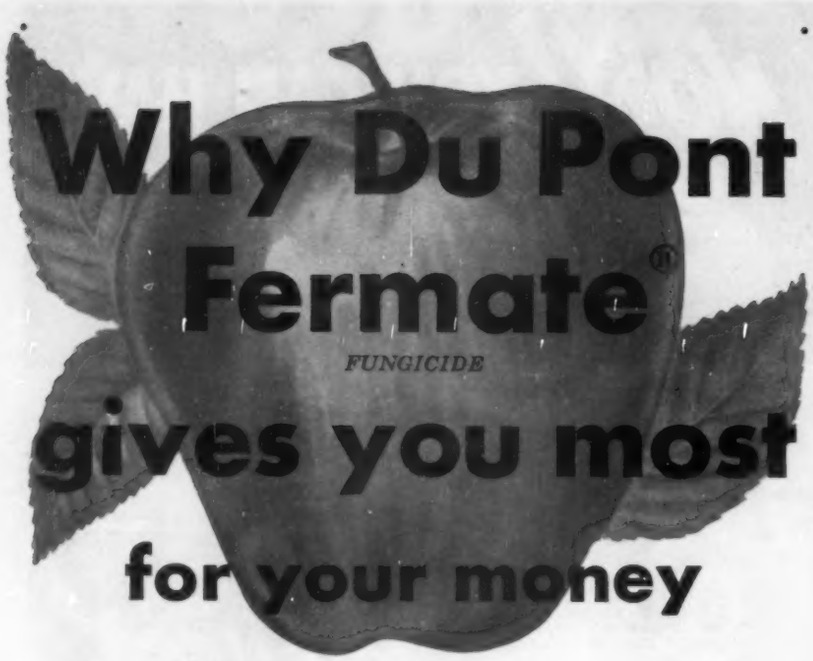

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Fermate® FUNGICIDE

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

CITRUS

(*Continued from page* 19)

ing houses have installed precooling refrigeration equipment which provides rapid cooling of the oranges before loading. Precooled oranges have been arriving at markets in excellent condition and with a minimum of decay. The installation of precooling equipment in many other houses within the next year will lead to a further gain in the use of cartons for the shipment of oranges.

The carton has been accepted by the great majority of the trade. They like its ease of handling, the absence of damaged and misshapen fruit, and the generally fine arrival condition of the fruit. The carton has also been used successfully in export shipments, and overseas buyers like the new package. In fact, Spain, Italy, and North Africa are so enthusiastic about the carton that they are ordering similar containers for their own shipments.

In the field of transportation, there have been some minor changes. Shipments by truck have shown a slight increase, especially to western points. Eastern markets, however, are still being served almost entirely by rail carriers. The railroads have reduced by one day the traveling time to eastern and Pacific Northwest points.

Future Crop Prospects Bright

Central California's navel orange crop for the 1955 season appears to be one of the finest in years. The crop is estimated at 15,750 cars tree crop, of which some 12,600 cars are predicted for movement in fresh channels under volume proration.

The bloom period was short and followed the normal pattern of blooming first in the foothill areas and gradually spreading to the valleys. This seems to indicate a more uniform maturity for each district. A good crop with larger sizes than last year is in prospect.

In southern California, all navel orange districts have reported a good fruit set and sizes are a little better than average for this time of the season. After getting off to a good start, growth has been somewhat disappointing of late. However, the coming rainy season should help immeasurably. The field department of the Navel Orange Administrative Committee predicts a tree crop for Southern California of 18,500 cars.

The oncoming Valencia orange crop appears to be about double that of last year.

The lemon crop appears excellent and production should wind up somewhere between the short crop of a year ago and the bumper crop of this year. THE END

FRUIT VARIETIES

(*Continued from page* 31)

Pomology, California Agricultural Experiment Station, Davis. It is a bud mutation of Black Tartarian, being discovered in 1931 as one-half of a tree of Black Tartarian on mazzard rootstock; leaves of rootstock suckers differ from Sanquinetti, so it is assumed that it arose as a bud sport. Fruit is normally somewhat larger but with same maturity as Black Tartarian. Stem length is medium to short, heavy and thick. Fruit is a little more pointed than parent although not as much so as Lambert. It must be picked within two or three days of maturity, otherwise fruit pulls away easily from stem; however, it ships well to eastern markets. Tree is a shy bearer. It is a pollinator for Bing as it blooms at the same time as Black Tartarian.

GRAPE

Beauty Seedless is the first black seedless grape to be produced by breeding. H. P. Olmo originated this new variety at California Agricultural Experiment Station, Davis, introducing it commercially in 1954. Clusters are long with loose shoulders. Individual berries are seedless, ovoid, and blue black, with a waxy surface overlying a tender skin. Flesh is firm, sweet, and juicy. Fruit is size of Thompson Seedless and ships and keeps well. Matures very early, with Perlette, also an introduction of the California station. Vine has medium vigor, dark blue-green foliage, and fruits well with either spur or cordon pruning. Resulted from cross Scolokertek kirqlynoje x Black Kishmish made in 1941.

Dix originated in Beltsville, Md., USDA., C. A. Magoon and I. W. Dix cooperating in its production. It was introduced commercially in 1954 jointly by USDA and New Jersey Agricultural Experiment Station. This hybrid is the result of crossing America with Bailey. Primarily of value as a juice grape rather than for fresh fruit purposes. Ripens in about the same season as Concord, being of medium size, black, with a mild to neutral flavor. Notable feature of the fruit is the intense red coloration in the juice and pulp, making it of value for blending where more color is desired. Soluble solid content ranges from 16 to 19 per cent, with an acidity of 0.7 to 0.8 per cent. Vine is vigorous and productive. This variety has been tested principally in New Jersey and Maryland.

Dallas was introduced in 1953 by the Dalco Nursery, Selma, Ala. It is a muscadine type, extremely large, being over an inch in diameter. Skin is reddish black and dotted. Quality is good; fruit matures in midseason and hangs well on the vine but leaves a clean scar when harvested. Discovered in 1940 by a member of Alabama Agricultural Experiment Station and C. B. Meador, but its parentage is unknown.

Lake Emerald, introduced commercially January 1, 1954, originated in Leesburg, Fla., by Loren H. Stover of the Watermelon and Grape Investigations Laboratory of Florida Agricultural Experiment Station. It resulted from the cross Pixioloa *(Vitis simpsoni)* x Golden Muscat. Fruit is recommended primarily for local markets; sugar content is high. Vine yields well and is resistant to Pierce's disease.

Queen is another variety originated by H. P. Olmo, California Agricultural Experiment Station, Davis, being introduced last year. Clusters are large and loosely winged. Berries are large, dark red,

(*Continued on page* 44)

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Methoxychlor Insecticide

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In addition to its excellent control of curculio, "Marlate" methoxychlor contributes to fine finish. It doesn't cause russeting, even on sensitive varieties. It's compatible with commonly used fungicides.

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FRUIT VARIETIES

(*Continued from page* 43)

ellipsoidal, and of uniform size. Flesh is firm at maturity, of medium sugar and acid content. Matures just after Red Malaga (Molinera). Queen stores and ships very well. Vine is of medium vigor, requires reduction in number of flower clusters, and is fruitful when spur pruned.

NECTARINE

Fireglobe produces large sized fruit, 2¼ to 2½ inches in diameter. Skin color develops a high red blush before maturity. Flesh is bright yellow with red pit cavity, firm, with very good quality. It is a freestone. Fireglobe was originated by the late Prof. Guy L. Philp and Claron O. Hesse of California Agricultural Experiment Station, Davis. Its parentage is as follows: [An open pollinated seedling, California 17-13, of (Fay Elberta peach x Lippiatt seedling 29F3)] x self.

Globerta bears patent number 1,230, dated November 17, 1953, and was selected in Omaha, Nebr., by Henry Field Seed and Nursery Co. (Frederick Wenzel HofMann) from the cross Fuzzless-Berta x self. Flavor is very good and the fruit ships well. Tree is hardier than Elberta and J. H. Hale peach varieties, is apparently resistant to brown rot.

Grand River is a yellow fleshed, semi-freestone variety, ripening one week earlier than John Rivers or about June 15 in Le Grand, Calif., where it was originated by F. W. Anderson. It bears patent number 1,248, dated February 2, 1954, but was introduced commercially in 1953. It has been assigned to the Reedley Nursery, Reedley, Calif.

Gold Nuggett is another F. W. Anderson origination. It bears patent number 1,249, dated February 2, 1954, and was also assigned to the Reedley Nursery. Flesh is yellow, firm, and free from the pit. It has an attractive appearance. Ripens between John Rivers and Gower at Le Grand, California.

Grandeur, a third introduction of F. W. Anderson in 1953, was patented March 23, 1954, as patent 1,265, and likewise assigned to Reedley Nursery. It is an open pollinated seedling of Le Grand. Flesh is yellow but clingstone, being very similar to Le Grand but more productive, has more external red color, and ripens about one week later.

Merrill Princess originated in Red Bluff, Calif., by Grant Merrill. Flesh is yellow, firm-melting when ripe, and freestone. Skin is a mahogany red nearly all over. Its maturity is the same as for John Rivers. Tree bears regularly and heavily. Introduced in June, 1954; a patent has been applied for.

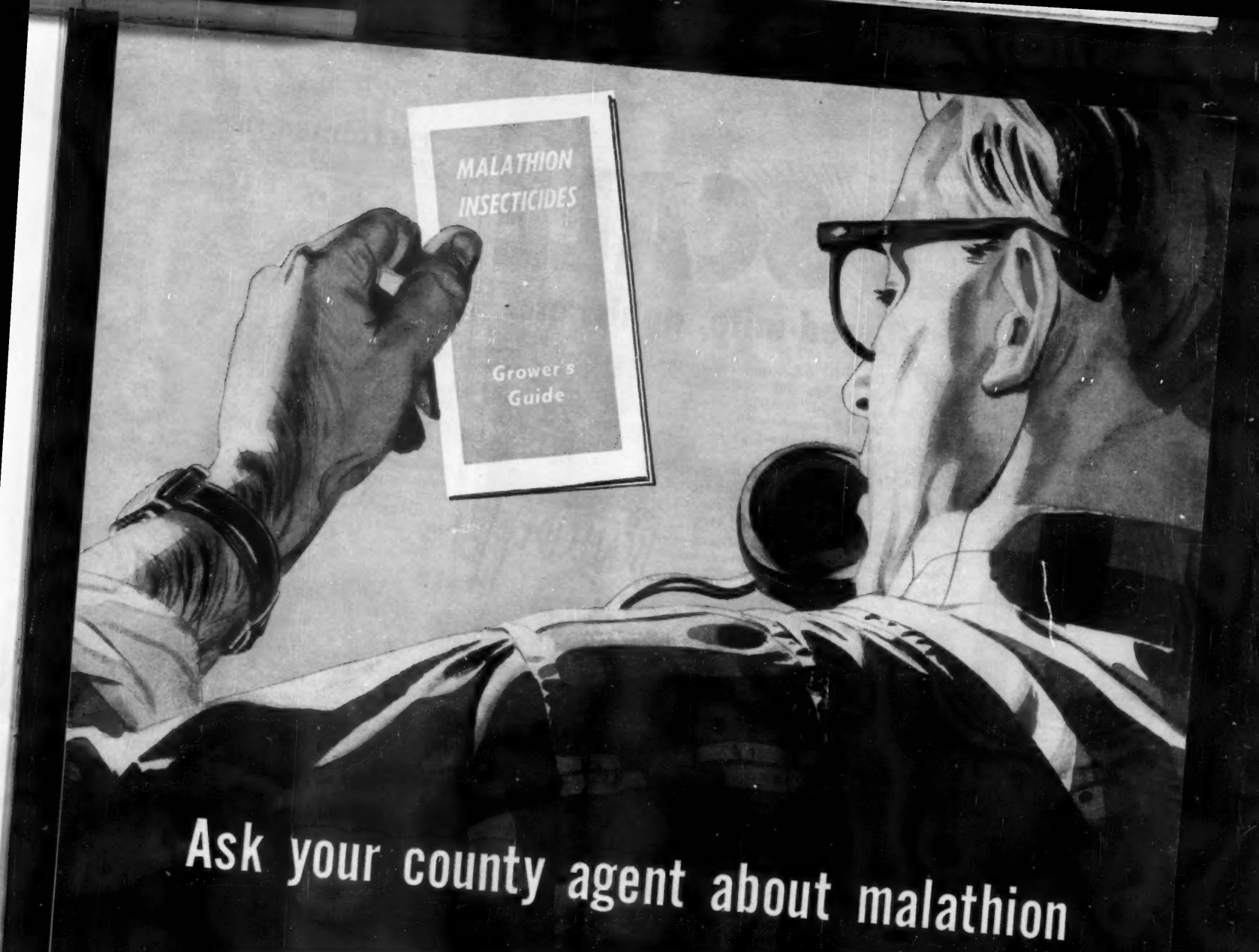
PEACH

Duke of Georgia originated in Fort Valley, Ga., by John F. Duke, but was patented, as number 1,236, by John F. Duke, Sr., John F. Duke, Jr., and Leman P. Duke, on December 28, 1953. Plantings are restricted. Fruit resembles Erly-Red-Fre very closely but matures about 10 days earlier than that variety.

Frye Cling is another patented peach, number 1,210, origated in Yuba City, Calif., by Lloyd Frye. A bud sport of Paloro, discovered in 1933. Flesh is yellow, clingstone. Maturity is about 12 days before Paloro which it resembles.

Fulmur, patent 1,172, originated with Carroll M. Fulkerth and Willette B. Murray, Modesto, Calif., and was in-

(*Continued on page* 46)



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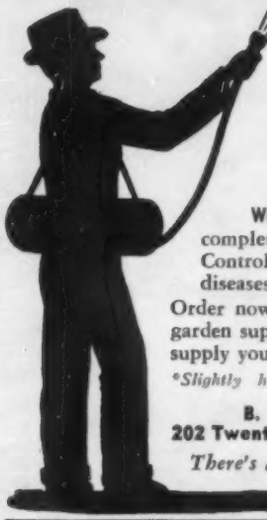

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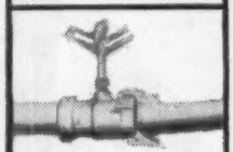

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FRUIT VARIETIES

(*Continued from page* 44)

troduced last year; patent rights are held by the originators. It is an open pollinated seedling of Elberta, with yellow freestone flesh which is firm, melting, and has a mild and sub-acid flavor with a distinct aroma. Fulmur ripens 7 days before Fay Elberta at Modesto, or about July 24. Average diameter, 2⅞ inches.

Golden Promise has yellow flesh with a fine flavor and is a clingstone. Ripens about July 30 at its place of origin, Chico, Calif., where it was discovered by G. C. Banta as a seedling of unknown parentage. Introduced last year.

Keystone was produced by John H. Weinberger, USDA Horticultural Field Station, Fort Valley, Ga., and was commercially introduced July 8, 1954. It resulted from the cross Newday x Southland. Flesh is yellow, firm, smooth-textured with good flavor. Fruit is round; pubescence is light. A light attractive red blush covers a bright golden ground color. About the same size as its parents. Pit is very nearly free, resembling Newday, and slightly less free than Southland. Ripens with Early Hiley, being slightly ahead of Triogem or three to three and one-half weeks ahead of Elberta. Tree is vigorous and productive, and less bacterial spot is found on it than on Southland and Elberta. Keystone is self-fruitful; flowers bloom about same time as Newday and Southland in Fort Valley area. Chilling requirement to break rest period of the buds places it in the 750-hour group with Southland. Keystone has had only a very limited trial and is recommended for planting as a commercial shipping variety only on a trial basis; it may prove most useful in filling the place in the harvest season occupied by Early Hiley, which is losing popularity because of its white flesh.

Merrill Gemfree is one of Grant Merrill's introductions, originating in his orchard at Red Bluff, Calif.; he has applied for a patent. The yellow flesh, when held until soft, is a melting freestone; when firm-ripe, it has the texture of Merrill Gem. Skin color is red. Tree blooms and sets more heavily than Merrill Gem. Result of cross July Elberta x Merrill Gem. Merrill Gemfree was introduced commercially in June, 1954.

Merrill Hale, another introduction made by Grant Merrill, Red Bluff, Calif., is an open pollinated seedling of J. H. Hale. It was patented January 19, 1954, bears patent 1,246, and was commercially introduced in January, 1953. Flesh is yellow. It is larger, firmer, and better colored than July Elberta but not as large or as firm as J. H. Hale. Ships well. Ground color is bright with a red blushed overcolor. Harvest season is between July Elberta and Elberta. A freestone.

Merrill Halloween I, introduced by Merrill in June, 1954, is an open pollinated seedling of Merrill Rodeo, first noted October 1, 1951, and selected in October of 1953. Fruit has yellow flesh, is firm and a freestone, and ripens extremely late, about 70 days after Elberta or about October 10 at Red Bluff. Most nearly resembles Merrill Fiesta. Patent applied for.

Merrill Halloween II was introduced commercially in June, 1954, by the originator, Grant Merrill, Red Bluff, Calif. A patent has been applied for. Open pollinated seedling of Candoka x Rio Oso Gem. This freestone peach ripens very

(*Continued on page* 48)

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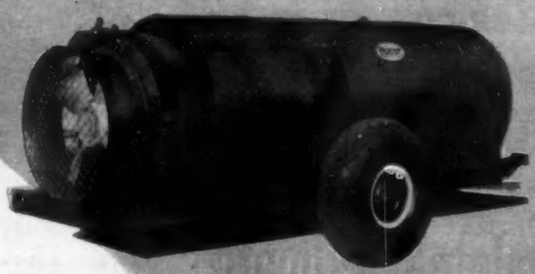

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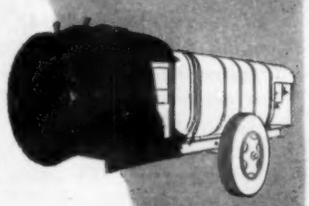

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Song of an Orchardist

IN WINTER

By ALBERT L. MASON
Albion, N.Y.

The snow drifts over pasture fence;
There's rabbit tracks down
orchard rows;
The season's ample evidence
I should be trimming, goodness
knows!

As usual at this time of year
I coast a bit; avoid the drive
Of apple harvest atmosphere;
Content to know I'm still alive.

Seems good to sit in easy chair
And soak up heat from furnace
fire;
Free for awhile from fungus scare
And constant vigil bugs require.

If apple trees take time to rest,
Why shouldn't I rest with 'em?
Do other fruit growers get obsessed
By Mother Nature's rhythm?

FRUIT VARIETIES

(*Continued from page* 46)

late, some 80 days after Elberta, or about October 20 at place of origin; Flesh is yellow and firm. Most nearly resembles Merrill Fiesta.

Merrill Pageant is a yellow freestone, ripening very late, from late September to early October or 50 days later than Elberta. Most nearly resembles Merrill Fiesta but is 10 days later and has more color. Patent has been applied for by Grant Merrill, the originator. It is an open pollinated seedling of Kirkman Gem, discovered October 1, 1948, and selected in September, 1953.

New Covenant origated in Chico, Calif., by G. C. Banta, who introduced it in 1954. This is a yellow fleshed clingstone, ripening at the end of the usual commercial canning clingstone season. Parentage is unknown.

Peterson Elberta bears patent 1,228 dated December 4, 1953, the year in which it was commercially introduced. This yellow-fleshed freestone is firm and large, ships well, and matures before Kim Elberta and July Elberta; most nearly resembles Rio Oso Gem but the skin is more highly colored. This bud sport of Early Elberta was discovered by H. C. Peterson, Reedley, Calif.

Redglobe is a yellow-fleshed freestone, very firm, fine textured, and with good flavor. Ripens with July Elberta or about 15 days earlier than Elberta. Skin color is especially bright and attractive and at maturity about three-fourths of the skin surface is covered with a bright red blush over an attractive yellow ground color. Redglobe is free from any red throughout the flesh, but with some red around the stone. Acceptable for canning and attractive as a frozen product. Should be well suited to long-distance shipments. Tree is productive and vigorous. Chilling requirement to break rest period of the buds seems about the same as Elberta. Susceptibility to bacterial spot disease is about the same as that of Elberta. Flowers are large and self-fertile, usually opening about same dates as those of Elberta. This is an origination by the USDA Horticultural

Crops Research Bureau, Beltsville, Md. Commercial introduction occurred in May, 1954. Result of cross (Admiral Dewey x St. John) x Fireglow.

Royal Hale, another of F. W. Anderson's introductions from Le Grand, Calif., was introduced commercially in 1954 and was patented (1,247) January 26, 1954. Its parentage is Le Grand nectarine x Elberta. It has more red skin color than J. H. Hale which it most nearly resembles, and its quality is better than that variety. Ripens three days earlier than J. H. Hale. Tree is self-fruitful. Royal Hale patent rights have been assigned to Reedley Nurseries, Reedley, Calif.

Valdero is a California introduction, having been originated by James Valdero, Parlier. It bears patent 1,205, dated July 14, 1953, and was introduced commercially in 1953. Flesh is white with red around pit, freestone, with low acid content. Skin is dark red. Maturity is about 10 days before Elberta at place of origin.

PEAR

Ayres was originated by Brooks D. Drain, Tennessee Agricultural Experiment Station, Knoxville, and was introduced in 1953. Fruit is juicy and sweet, and is good for eating both fresh and canned. Skin is golden russet with a rose tint. First picking may be made in mid-August at the place of origin. The tree is resistant to fire blight. Garber and Anjou were its parents.

Colette is a chance seedling discovered about 1948 by Mrs. Marie Dreyer, Freeport, Ill., and was introduced commercially in fall of 1953. Patent is pending and is to be assigned to Henry Field Seed and Nursery Co., Shenandoah, Iowa. Fruit matures over a long period, has fine flavor, most nearly resembles Bartlett.

Dabney was also originated by Brooks D. Drain, Tennessee Agricultural Experiment Station. This high quality fruit variety matures early, with a first picking late in July at Knoxville, Tenn. Tree yields well and is quite resistant to fire blight. The cross Seckel x Garber produced this hybrid.

Hoskins' most valuable characteristics are its fire blight resistance and its late maturity, with a first picking about October 1, at Knoxville, Tenn., where it was originated by Brooks D. Drain, Tennessee Agricultural Experiment Station. Introduced commercially in 1954.

Mooers is the fourth pear variety originated and introduced in 1954 by Brooks D. Drain, Tennessee Agricultural Experiment Station. It was hybridized in 1934, with Duchesse d' Angouleme and Late Faulkner as the parents. Ripening extends from late September into October, with the fruit keeping well until December under refrigeration. Skin is golden russet. Fruit is large and fine for canning. Tree is resistant to fire blight and leaf spot.

PECAN

Hodge is an open pollinated seedling of a native tree, discovered about 1890, grafted in 1942, and commercially introduced in 1954 by Gerardi Nursery, Caseyville, Ill. It is one of the first northern pecans to attract attention. Originated by H. H. Hodge in York, Clark County, Ill. The nut is one of the finest flavored of all pecans, but is probably not adapted to commercial cracking.

PLUM

Edwards is a patented (1,213) variety but is not yet commercially introduced by Lawrence C. Edwards, Oakland, Calif.,

(*Continued on page* 50)

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Joe Marsh

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FRUIT VARIETIES

(*Continued from page* 49)

the originator. It is a European-type fruit with greenish amber flesh, fine and melting texture, subacid to mild in taste, semi-freestone and with a deep purplish red skin. It arose as a chance seedling.

Laroda was originated and introduced (1954) by Claron O. Hesse, California Agricultural Experiment Station, Davis. Gaviota and Santa Rosa were crossed in 1940 to give this hybrid. Skin color is a full dark red. Flesh is amber with some red next to the skin at full ripe stage, firm, with excellent quality. Season is mid-July in California. Laroda possesses excellent shipping characteristics.

Nubiana is another origination and introduction (in 1954) of Claron O. Hesse's California Agricultural Experiment Station, Davis. Fruit is large with a flat shape; skin color is a dark purplish-red. Flesh is firm, light amber, meaty, and with fair quality. Matures in late July in California, and ships well. Parents were Gaviota and Eldorado.

Queen Ann has a dark mahogany skin color, with the flesh being light amber, firm, meaty, and with very good quality. It storage and transport characteristics are excellent. Harvest season is mid-August in California. This plum variety was also originated and introduced, in 1954, by Claron. O. Hesse, California Agricultural Experiment Station, Davis.

Redroy is the fourth plum variety to be introduced in 1954 by Claron O. Hesse, California Agricultural Experiment Station, Davis. Its parents are Gaviota and Elephant Heart. Picking occurs in mid-July in California. Skin color is a bright, full red. Flesh is bright amber, firm, meaty, with excellent quality. Shipping characteristics are tops.

RASPBERRY

Puyallup originated in Puyallup, Wash., by C. D. Schwartze and Arthur S. Myhre, Western Washington Experiment Station. Introduced commercially in December, 1953. Fruit is red, better colored than Willamette, and larger and firmer than those of Washington. Puyallup is fine for all types of processing and is excellent for fresh shipments.

STRAWBERRY

Arapahoe was produced by LeRoy Powers, E. D. Krouch, and D. H. Scott, USDA Cheyenne (Wyo.) Horticultural Field Station, being released in 1954. Fruit is very large, bright red, very firm, and suitable for freezing. Plants are everbearing, hardy, drought tolerant, and extremely vigorous. Arapahoe is recommended for Colorado and Wyoming.

Dixieland was introduced commercially November 1, 1953, by USDA and North Carolina Agricultural Experiment Station. It was produced at Beltsville, Md., by George M. Darrow and D. H. Scott, USDA. Ripening season is about the same as that of Blakemore. Fruit is medium to large, strong to vivid red, being a slightly deeper red than Blakemore, glossy, with a tough skin. About as firm as Albritton but firmer than Blakemore. Shape is uniform. Dixieland is very good for frozen package trade and for preserving. Plant is vigorous and productive; does not show any yellow variegation. Yields better than most other varieties from Washington, D.C., to southern North Carolina and west to Missouri. Has been tested from New Jersey to North Carolina and west to Arkansas and is promising throughout this area. Especially promising as an

(*Continued on page* 52)

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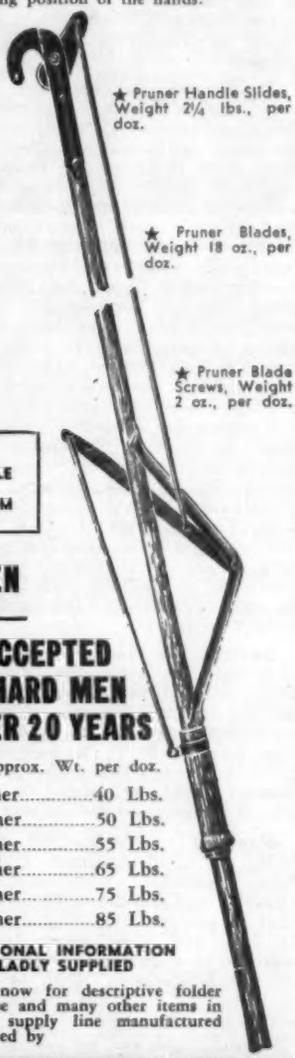

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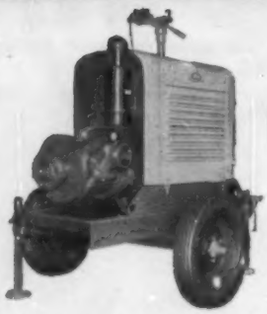

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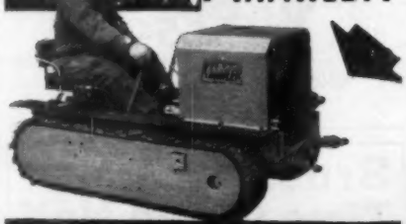

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FRUIT VARIETIES

(*Continued from page* 50)

early variety to be grown with Albritton as a later variety.

Phelps comes from Durham, N.H., where L. P. Latimer originated it at University of New Hampshire, and introduced it in 1954. Flesh is red, firm, with excellent flavor, and has an attractive medium dark red skin. Produces over a long season. Plant produces many vigorous runners and yields very well. Cross King x (Tupper x Fairfax) produced Phelps.

Pocahontas was produced by USDA and Virginia Truck Experiment Station, being introduced October 1, 1953. Fruit is deeper red and ripens about one week later than Blakemore. Size is large and maintains better size throughout picking season than Blakemore. Skin is tough and glossy; seeds are slightly sunken. Shape is fairly uniform. Flavor is tart and good. Plants are vigorous, productive, and have shown no yellow variegation; they are not resistant to red stele root rot. Yields have been better than those of most varieties from Washington, D.C., to Norfolk, Va. In replicated plantings at Beltsville, Md., its yield averaged for 1951 and 1952 at rate of 474 crates (of 24 quarts each) per acre, much more than Blakemore. In a test for the frozen package trade it has been rated high in color, texture, and flavor. Pocahontas is most promising in Norfolk, Va., area and is well adapted to fall planting in eastern Virginia, where it produces a satisfactory crop of fruit in spring on fall-set plants. Appears to be widely adapted throughout south-central U.S.

Radiance produces a medium sized, deep red, firm fruit suitable for freezing. Plant is everbearing, vigorous, and winter hardy at Cheyenne, Wyo. Recommended for Colorado and Wyoming. LeRoy Powers, E. D. Krouch, and D. H. Scott, Cheyenne Horticultural Field Station (USDA), originated it and introduced it commercially in 1954.

Strafford was originated in Durham, N.H., by L. P. Latimer, University of New Hampshire, who made the cross (Simcoe x Catskill) x (Tupper x Fairfax) to produce this new variety. Flesh is dark red with good flavor. Fruit tends to be slightly soft in cloudy weather. Strafford ripens 10 to 14 days later than Howard 17. Plant is perfect flowered and yields heavily.

WALNUT

Boone is a Carpathian type walnut and was originated by Philip Taliaferro in Erlanger, Kenton County, Ky., and was named, propagated, and introduced commercially in spring of 1953 by Sterling Rouse, Florence, Ky. Nut is rich in flavor and sweet with no bitter taste. Shell is medium in thickness. Nuts run about 40 per pound. Tree bears well.

Kentucky Papershell is also a Persian type walnut of Carpathian origin, produced by the same originators. Shell is thin, with about 45 nuts to the pound. Tree is very vigorous; needs a pollinator to produce good yields.

Weschcke bears patent 1,229, dated November 17, 1953, and was commercially introduced the same year. Carl Weschcke, River Falls, Wis., is the originator. It is an open pollinated seedling of the common Easter black walnut (Juglans nigra), having a shell thinner than the average black walnut. Kernel keeps well, is fairly easy to extract. THE END

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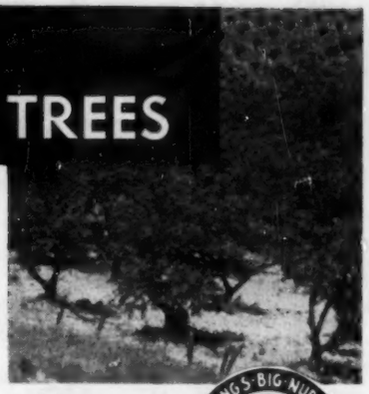

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253

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